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THE FAUNA OF ELATERIDAE IN THE JAPANESE EMPIRE

BY

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THE FAUNA OF ELATERIDAE IN THE JAPANESE EMPIRE

By

Yûshirô MIWA

PREFACE

Although there are many works on the Elateridae indigenous to the Japanese Empire ably written by such authors as E. CANDÈZE (1860, 1865, 1873), V. de MOTSCHULSKY (1860, 1866), A. W. BATES (1866), G. LEWIS (1879, 1894, 1895, 1896), H. J. KOLBE (1886), L. von HEYDEN (1887), E. KOENIG (1887), J. FRIVALDSZKY (1892), C. SZOMBÀTHY (1910), S. MATSUMURA (1911) and others, a complete study of the fauna of the Empire has not up to the present been published.

Since 1924 however, the author of this volume has made a special study of this somewhat neglected subject, relative to Japan and its adjacent countries, and also continuing this study from 1929 as one of the tasks given by the chief of the Department of Agriculture of the Government Research Institute.

The account given below is the result of an investigation made by the author up to 1933. It is a very difficult matter for a specialist who intends to delve deep into this group in the Japanese Empire, because of his inability to examine the type specimens described by authorities on the subject as E. CANDÈZE and G. LEWIS, and which specimens are deposited in the British Museum (Nat. Hist.) or those in the Helsingfors and Leyden Museums. Fortunately many paratypes of Japanese species together with the species belonging to the British colonies as India or New Zealand, have been brought by Prof. T. SHIRAKI from London through the kindness of the late Dr. G. LEWIS, F. L. S. On the other hand, the author has received many named and unnamed species from various parts of the world from many entomologists in this country and abroad. With these materials and the literature which has been donated to the library of the

institute through the kindness of Prof. T. SHIRAKI, the author has been enabled to complete this study. All the type specimens described as new in this paper will be preserved in the collection of the Department of Agriculture of the Government Research Institute, Formosa.

The author's hearty gratitude must be offered to Prof. Dr. S. MATSUMURA of Hokkaidô Imperial University, who so kindly encouraged him in the beginning of this study and his best thanks are due to the late Prof. Dr. K. OSHIMA, previous director of the Department of Agriculture of the Government Research Institute, Formosa, for giving him several opportunities to collect and assistance in various ways.

Moreover the author has insufficient words to express his acknowledgement to Prof. Dr. T. SHIRAKI whose continual encouragement and kind aid were indispensable to the accomplishment of this study. At this opportunity he wishes to tender his cordial thanks to Dr. W. HORN, director of the Entomological Museum of Berlin-Dahlem, and Prof. Dr. T. ESAKI of Kiushiu Imperial University, for the loan of valuable specimens, and also to Dr. E. FLEUTIAUX of the National Museum of Natural History, Paris, for sending him many personal notes and determined specimens from Indo-China, which benefited him very much.

He would like here to record his indebtedness to Messrs. B. SAKUMA and M. ARAI, who have been kind enough to assist him by accurate drawings. His obligations are also due to the following gentlemen: Messrs. Dr. S. ISSIKI, S. MINOWA and M. CHÛJÔ of Taihoku Imperial University; Dr. R. TAKAHASHI, J. SONAN and K. FUKUTA, entomologists of the Institute; Dr. H. KÔNO, K. DOI, C. WATANABE and S. KATÔ of the Entomological Institute of Hokkaidô Imperial University; S. TAKANO and M. YANAGIHARA, entomologists of the Government Sugar Experimental Station, Formosa; K. SATÔ of Yokohama, entomologist of the Hawaiian Sugar Planters Association; H. YASHIRO of the Agricultural Experimental Station at Naha, Okinawa; M. HORI and K. TAMANUKI, entomologists of Karafuto Central Experimental Station; S. ARAKAWA, Professor of Taihoku High School; T. MITONO, entomologist of the Forest Bureau of the Government of Formosa; K. KAMIYA, entomologist of Tôkyô Agricultural College; S. SAKAGUCHI and K. HICHIRYÔZAKO of Wakayama Normal School, Japan; R. YAMAHO, member of the Agricultural Experimental Station at Heitô, Formosa, and K. ÔBAYASHI of Onomichi, Japan, who have kindly given a number of valuable specimens or have assisted him in various ways.

INTRODUCTION

I. General Characters with the Introduction to Terminologies of the External Structure

HEAD

Head firmly inserted into prothorax to the hind margin of eyes and usually wider than long; forehead rather vertical or declined anteriorly and very variable in form, usually convex or rounded, but sometimes excavated and often depressed anteriorly, sometimes projected in crest-shape by the insertion of labrum and forming a semicircular carina anteriorly in general, then it seems to have double frontal borders with labrum; the crest occasionally not conspicuous and the nasal area very narrow, after all the frontal carina developed confluently with the labrum and the nasal area obsolescent; *frontal carina* semicircular or oblique at side and pointed or truncated at the anterior rim, sometimes it is emarginate at centre.

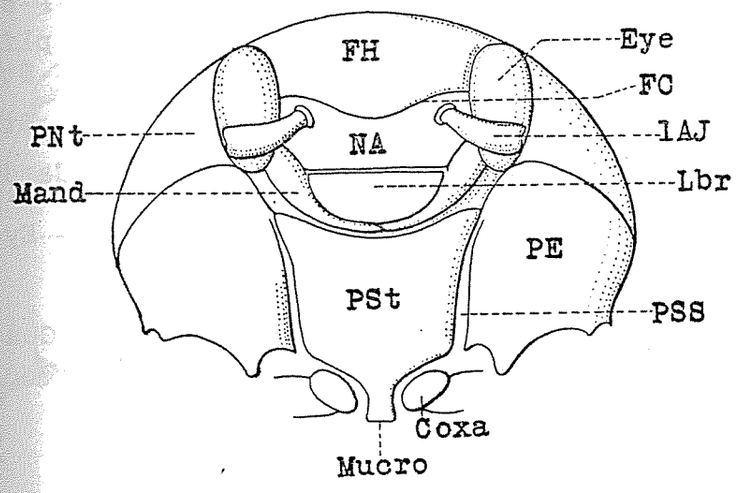


Fig. 1

Frontal and ventral view of head and prothorax of *Melanotus legatus* CANDÈZE. FH=forehead, NA=nasal area, Lbr=labrum, Mand=mandible, FC=frontal carina, 1AJ=first antennal joint, PNt=pronotum, PE=pronotal epipleuron orproplevron, PSt=prosternum, PSS=prosternal suture.

MOUTH PARTS

Labrum generally large, forming a nasal area but often it is inclined anteriorly and in that case the nasal area is very narrow or entirely wanting. *Mandible* usually falciform, commonly bifurcated but often simple, sometimes more or less strongly toothed at the apex. *Maxilla* usually small and bilobed, with thick and long hairs at the end; *maxillary palpus* usually consists of four joints, the basal joint the smallest, the next two joints variable in length and the terminal joint variable in shape, viz. spindle shaped, axe shaped, triangular or cylindrical. *Labial palpus* usually short and consists of three joints, the last joint variable in shape like those of maxillary palpus and in general very distinct; *hypopharynx* membranous and produced forwards beyond the mentum.

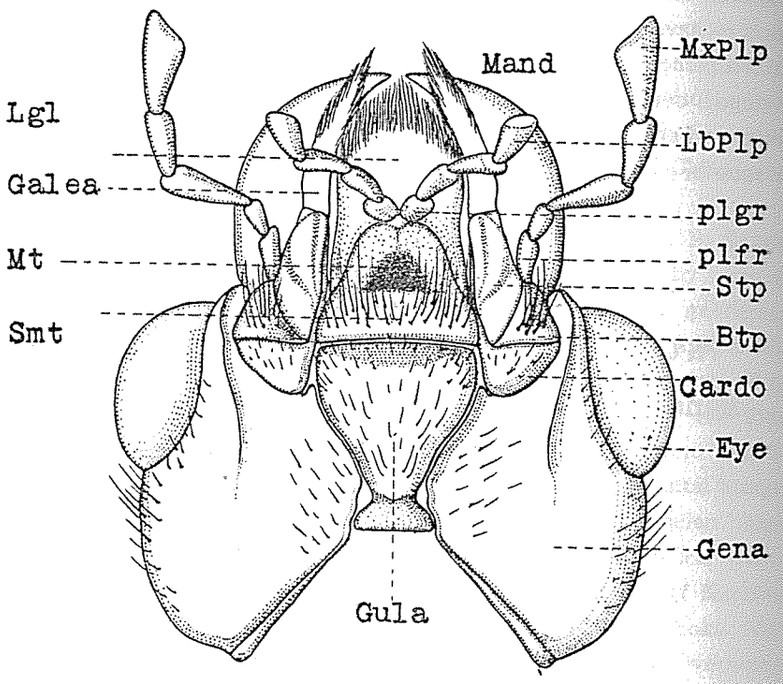


Fig. 2

Ventral view of head and mouth parts of *Campsosternus auratus* DRURY. Mand=mandible, MxPlp=maxillary palpus, LbPlp=labial palpus, plgr=palpiger, Plfr=palpifer, Btp=basistipes (or stipes), Stp=stipes (or subgalea), Lgl=ligula, Mt=mentum, Smt=submentum.

ANTENNAE

Very variable in length from longer than the body to shorter than the prothorax, being moniliform but commonly rather serrate, sometimes pectinate (Pl. VII, f. 15) or rarely lamellate (Pl. I, f. 12a & 14a), and usually consists of eleven or twelve joints. When the eleventh joint is last sometimes strongly constricted near the apex and seems to be terminated with a twelfth joint in general outline.

THORAX

Prothorax nearly half elliptical, sometimes more or less cylindrical or conical and at the base strongly depressed, sometimes having a pair of furrows which are called the *basal furrows* at the pronotal base, the lateral margin distinct or imperfect, sometimes lacking entirely; *hind angle* (*pronotal posterior angle*) more or less produced backwards, often diverged or turned outwards from the course of the extension of margin; *fore angle* variable in shape.

Prosternum semicircular at the anterior rim of mentum and more or

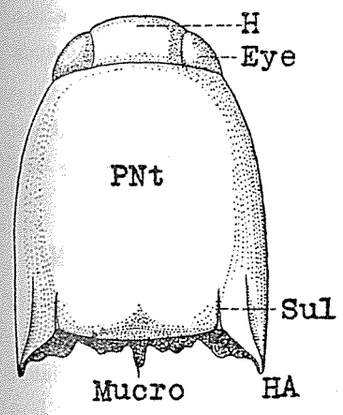


Fig. 3

Dorsal view of prothorax of *Melanotus tamsuyensis* BATES. H=head, PNt=pronotum, sul=sulcus (basal furrow), HA=hind angle.

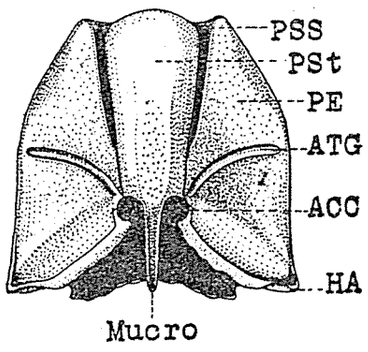


Fig. 4

Ventral view of prothorax of *Lacon seliger* BATES. PSS=Prosternal suture, PSt=prosternum, PE=pronotal epipleuron, ATG=anterior tarsal groove (or oblique furrow), HA=hind angle.

less produced (except in one subfamily), being strongly narrowed between the front coxal cavities and produced backwards in an acuminate process which is called *mucro* or *prosternal process*, the process usually curved inwards, but sometimes straight or bent at right angles behind the coxal cavity; the suture between the prosternum and pleuron, which is generally called *prosternal suture*, is commonly straight, sometimes curved inwards or outwards, being closed entirely, but sometimes more or less canaliculate or often furrowed partially or entirely to keep the antennae, and when it is not canaliculate or furrowed usually presenting a single line or rarely double; on the propleuron as well as on the metasternum sometimes impressed in *oblique furrows* to keep the tarsi of fore- and hind legs in situ (some of the *Agrypninae*).

Mesosternum having a groove (*mesosternal groove*) in the middle of anterior border to receive the prosternal process; the lateral border of the groove raised or depressed, sometimes horizontal or declined anteriorly, being parallel or diverged anteriorly. *Scutellum* usually visible and very variable in shape.

WINGS

Elytra (fore wings) generally elongate, rather broader than the thorax at the base, gradually narrowing posteriorly, usually rounded at the apex of

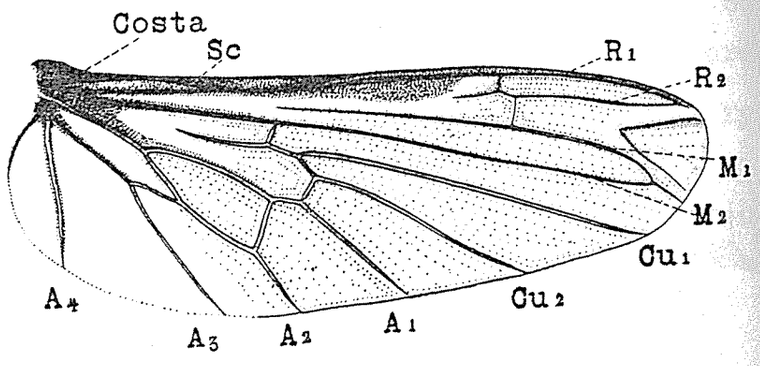


Fig. 5

Right hind wing of *Campsosternus auratus* DRURY. Sc=subcosta, R_1 R_2=first and second radius M_1 and M_2=first and second medius, Cu_1 and Cu_2=first and second cubitus, A_1-A_4=first to fourth anal.

each elytron or conjointly, but sometimes emarginate and sometimes truncate or acuminately pointed in the apical extremity.

Wing (hind wing) is of the Cantharoidean type which is characterized by the curved, hook-like connection which the anterior branch (M_1) of the media makes with the media (M_2), so that it looks like a recurrent branch of the latter. In a word, it is the loop formed at some distance from the apex of the wings by the coalescence of the two median veins and a single vein being continued to the margin from the centre of the loop. A somewhat similar loop is formed in the typical species at the apex of the radial veins, and transverse veins occur joining the cubital and anal veins. The distal parts of the branches of media frequently appear in the apical area of the wing as radiating veins, but are sometimes altogether absent.

LEGS

Comparatively short; *basal plate* covering the hind coxa, very variable in shape, viz. gradually widening inwards or at the inner one third point it is suddenly widened and rounded, sometimes angulately dilated but rarely having the same width throughout or dentate at the margin, sometimes it is evanescent outwards and not reaching to the side of the abdomen at the end; *tarsus* usually consists of five joints, simple, more or less compressed, pubescent or tomentous at the under sides, sometimes strongly dilated and depressed, rarely bilobed in a joint which is often heart shape or lamellate.

ABDOMEN

The general outline is elongate triangular, with the sides gently arcuate, especially on the apical third.

Usually five abdominal segments are visible (rarely six) on the under side and these are called ventral segments, but if the elytra are removed seven dorsal segments will be seen on the upper side. Thus the first apparent ventral segment is therefore morphologically the third or the fused second and third. The dorsal segments are morphologically called tergites while the ventral ones are sternites in general, but the term abdomen is often loosely applied by Coleopterists to the ventral segments only. In

fig. 6, the first ventral segment means the third sternite and the last (fifth) ventral segment indicates the seventh one. Sometimes anywhere from one to three additional segments are partially visible, known as the retractile segments of the abdomen, but these form a protrusible carrier for the external genitalia and are not ordinally visible in dry specimens.

The author quotes below from VAN ZWALUWENBURG's description of the retractile segments of the abdomen and the external genitalia of *Melanotus communis* GYLL., for his observations of *M. tamsuyensis* BATES, coincide with those of that author.

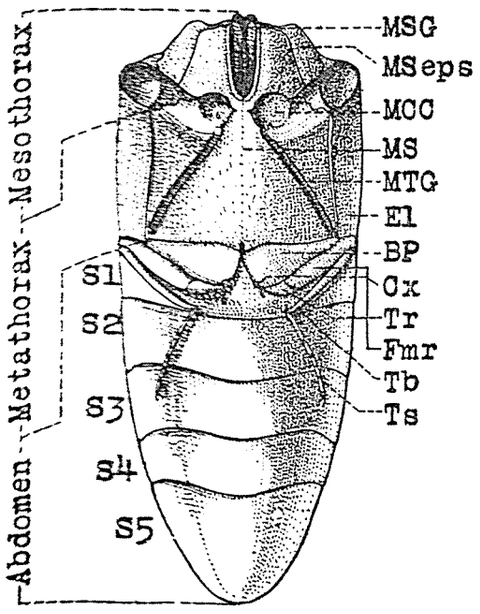


Fig. 6

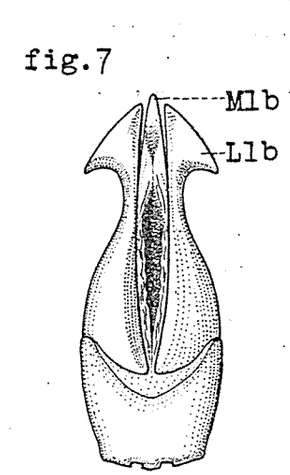
Ventral part of abdomen of *Lacon setiger* BATES. MSG=mesosteral groove, MSeps=mesosternal episternum, MCC=median coxal cavity, MS=mesosternum, MTG=median tarsal groove, El=elytron, BP=basal plate, Cx=Coxa, Tr=trochanter, Fmr=femur, Tb=tibia, Ts=tarsus.

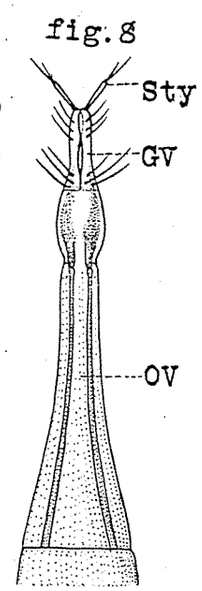
"The number and character of the retractile segments of the abdomen, vary with the sex and the species. In the male, the eighth tergite is very nearly flat and of the same degree of chitinization as the seventh tergite. The eighth sternite is nearly flat, and along its outer margins about as heavily chitinized as the corresponding tergite. The ninth and tenth tergites are subequal in length, together a little shorter than the eighth. The ninth sternite at its base is membranous, but towards its apex it becomes well chitinized. The tenth is flexible and about one-third the length of the ninth sternite. The eighth tergite of the female is membranous at the base but well chitinized apically. The eighth sternite slightly narrower and shorter than the former and is as heavily chitinized as the corresponding tergite. The ninth urosegment is entirely membranous and is not differentiated into tergite, sternite or pleurite."

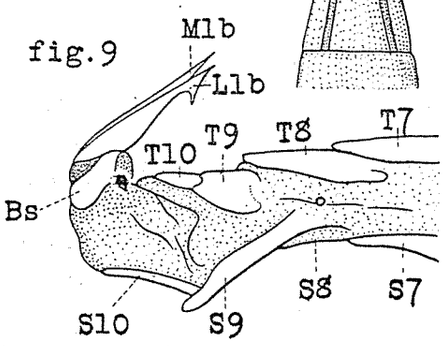
GENITALIA

"In the male genitalia, when it is at rest within the body, the outer apparatus is entirely concealed in the eighth abdominal segments with other retractile segments, but when fully exerted it is bent upon the turgid membranous structure which supports it, (fig. 9) upwards and forwards and its surface becomes reversed. It is generally depressed and consists of a *basal piece* (Bs) which is chitinous, and encloses within its open margin the base of a slender *median lobe* (Mlb) and two slender *lateral lobes* (Llb), namely the entire apparatus including the basal piece and the three lobes is termed the aedeagus. The shape of aedeagus is variable and very characteristic in species and valuable taxonomic characters have been found in the male genitalia especially in the lateral lobe.

The outer apparatus of the female genitalia is a slender, rather depressed, transparent, cylindrical tube which is usually called ovipositor (OV). It is ending in a bulbous structure which bears the *genital valves* (GV) and the *terminal styli* (Sty). The valves and styli are finely and sparsely haired."







Genitalia of *Campsosternus auratus* DRURY.
Fig. 7 Male; dorsal view of aedeagus.
Fig. 8 Female; dorsal view of ovipositor.
Genitalia of *Melanotus tamsuyensis* BATES.
Fig. 9 Lateral view of protrusible abdominal segments and aedeagus assumed when fully extruded.

Mlb=median lobe, Llb=lateral lobe, Sty=styli, GV=genital valves, OV=ovipositor, T7-T10=seventh to tenth tergites, S7-S10=seventh to tenth segments, Bs=basal piece of aedeagus.

II. Classification of the Subfamilies, Genera and Subgenera Indigenous to the Japanese Empire

Notwithstanding the fact that many works upon the taxonomic study of Elateridae have been published hitherto, we may perceive that one of the great works is Dr. E. CANDÈZE's "Monographie des Elaterides, I-IV, (1857-63)," when we consider only the family Elateridae. In this work Dr. CANDÈZE treated species collected from all over the world and made up this work with references of previous publications by the following authors: LINNAEUS, FABRICIUS, OLIVIER, LATREILLE, ESCHSCHOLTZ, SILBERMAN, REDTENBACHER, GYLLENHAL, ERICHSON, LE CONTE, STEPHENS, etc. (see bibliography). Afterwards, the studies of this family were mostly based upon this monograph such as the works of SCHAUFUSS, REITTER, SCHWARZ, KUHNT, FLEUTIAUX, etc., which have been referred to in the present study by the author. In this paper, after studing the literature, the author has prepared a key which seems to be the most useful for our fauna at present. He has mostly followed S. SCHENKLING's system in "W. JUNK's Coleopterorum Catalogus, 80 et 88, 1925 et 1927", in the arrangement of subfamilies, but some of them follow FLEUTIAUX's opinion. As regards the classification of genera, the author has mostly adopted the proposition of FLEUTIAUX, because the works upon the fauna of Indo-China (which resembles the southern part of the Japanese Empire) are very suitable for a study of the Japanese fauna. The genera which have been selected by the author from our fauna are *Yezodima* (1928, Yezo & Kuriles), *Taiwanathous* (1930, Formosa) and *Xanthelater* (1931, Loo-Choo & Formosa), besides four subgenera, viz. *Pseudelater* (nov. subgen., present designation), *Crepidophorus* MULSANT et GUILEBEAU, *Alcimathous* REITTER, and *Metactenicerus* (nom. nov.), not hitherto recorded from Japan. The last subgenus has been already reported by O. SCHWARZ in "Genera Insectorum, 46, Elat., p. 211, 1906" as the genus *Ludius*, section VII, which is a peculiar group represented by 7 Japanese and 2 Formosan species at present. The genus *Orithales* KIESENWETTER, is reported as new to the fauna in this paper while the species which have been previously described under the genus *Pittonotus*, are transfered to *Pheletes*, while the author has given a new name, *Curtisius*, to the genus *Haplotarsus* CURTIS (1854) in the *Hypnoidinae*, for it is preoccupied in *Corymbites*, as the subgenus *Haplotarsus* Stephens (1830).

Family Flateridae

Key to the Subfamilies

1. Metasternum truncate or rounded off; prosternum with a mentum; abdomen with five ventral segments.....(2)
1′. Metasternum acuminate; prosternum without mentum; abdomen with six ventral segments at least in the male, the sixth segment short and spurious, the fifth of the male sometimes emarginate or tongue-shaped, or rarely rounded. Hind angles of the pronotum without carina .....*DENTICOLLINAE*
2. Prosternal stures furrowed to receive the each antenna respectively in situ..... ..... *AGRYPNINAE*
2′. Prosternal sutures not furrowed or imperfectly separate at the anterior part..... .....(3)
3. Mesosternum separate from metasternum by a conspicuous suture .....(4)
3′. Meso- and metasternum confused, without separate suture between them ....*CHALCOLEPIDIINAE*
4. Tarsal claws with one or more bristles at the base .....*HEMIRRHIPINAE*
4′. Tarsal claws without bristle at the base .....(5)
5. Antennae with long lamellae in the male; tarsus usually simple .... *OXYNOPTERINAE*
5′. Antennae without lamella in both sexes .....(6)
6. Front with a distinct transverse crest which makes frontal carina, namely a crest-shaped carination, by insertion of labrum.....(7)
6′. Front without transverse crest at least in the middle or more or less carinate by a slight insertion of labrum .....(14)
7. Second and third tarsal joints lamellate and not dilated; first and fourth simple. Prosternal sutures slightly incurved .....*DICREPIDIINAE*
7′. Tarsal joints simple, sometimes third or fourth dilated or lamellate.....(8)
8. Prosternal process short and truncate; mesosternal groove horizontal and bent inwards at right angles in the anterior part; scutellum almost cordate .... *ESTHESOPINAE*
8′. Prosternal process not truncate; scutellum not cordate; mesosternal groove inclinate, rarely horizontal but never bent at right angles.....(9)
9. Basal plates of hind coxae strongly dilated inwards from the middle; claws of tarsus not pectinate ....(10)
9′. Basal plates gradually dilated inwards; claws pectinate.....(13)
10. Prosternal sutures straight or slightly incurved .....(11)
10′. Prosternal sutures generally outcurved and sometimes partly or entirely evanescent; second and third tarsal joints rarely lamellate .....*HYPNOIDINAE*
11. Fourth tarsal joint lamellate or dilated and heart-shaped .....*CONODERINAE*

11′. Fourth tarsal joint neither dilated nor heart-shaped .....(12)
12. Third tarsal joint lamellate .....*PHYSORRHININAE*
12′. Tarsal joints usually simple .....*ELATERINAE*
13. Tarsal claws pectinate; basal plates of hind coxae strongly and angulately dilated inwards from the middle .....*MELANOTINAE*
13′. Tarsal claws usually simple; second and third tarsal joints sometimes dilated... .....*ATHOINAE*
14. Front flat or concave; antennal furrows of the prosternal sutures narrow; frontal carina which spans over the antennal insertion rather transverse; labrum short, mouth opens obliquely downwards; prosternal sutures generally straight .... (15)
14′. Front convex; antennal furrows broad; frontal carina oblique; labrum large, mouth opens downwards; prosternal sutures generally curved .....(17)
15. Basal plates of hind coxae imperfect and not reaching lateral border of abdomen .....*DIMINAE*
15′. Basal plates perfect, distinctly reaching lateral border of abdomen .....(16)
16. Tarsus usually simple .....*CORYMBITINAE*
16′. Third and fourth tarsal joints lamellate .....*SENODONINAE*
17. Tarsal claws pectinate.....*SYNAPTINAE*
17′. Tarsal claws simple.....*LUDIINAE*

Subfamily AGRYPNINAE FLEUTIAUX

FLEUTIAUX, Voy. ALLUAUD & JEANNEL, Afr. or. Col., XIII, p. 6, (1919); Trans. Ent. Soc. London, p. 405, (1922).

Agrypnides CANDÈZE, Mon., I, pp. 15 & 17, (1857).

Agrypnites CANDÈZE, Rév. Mon., p. 1, (1874).

Agrypnini KIESENWETTER, Naturgesch. Ins. Deutschl., Col. IV, pp. 227 & 230, (1863).—REITTER, Best.-Tab., 56, pp. 4 & 6, (1905); Fauna Germ., III, p. 209, (1911).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. pp. 3 & 5, (1906).—HEYNE & TASCHENBERG, Exot. Käf., p. 151, (1908).—C. SCHAUFUSS, in CALWER, Käferb., ed. 6, 1907-16, p. 626, (1911).

Agrypnidae FLEUTIAUX, Ann. Soc. Ent. Fr., LX, p. 387, (1891).

Key to the Genera

1. Prosternal sutures perfectly furrowed; third joint of antennae longer than the second and nearly as long as the fourth .....(2)
1′. Prosternal sutures furrowed at the anterior half; third joint of antennae shorter than the fourth and nearly as long as the second.....(3)

2. Pronotal posterior angles with a long carina which is prolonged forwards along the lateral margin nearly to the front angle .....*AGRYPNUS*
2′. Pronotum without such carina .....*ADELOCERA*
3. Scutellum with a distinct longitudinal carina .....*MERISTHUS*
3′. Scutellum without such carina..... .....(4)
4. Epipleuron at each end with a groove to keep the femora of the median and hind legs respectively; median and hind femora not produced beyond the outer margin of epipleuron in situ .....*LACON*
4′. Epipleuron without such groove; median and hind femora produced beyond the sides of elytra in situ..... .....(5)
5. Pronotal posterior angle with a carina which extends forward along the lateral margin and reaches the front angle.....*COMPSOLACON*
5′. Pronotum without such carina .....*PARALACON*

Genus AGRYPNUS ESCHSCHOLTZ

in THON, Ent. Arch., II, 1, p. 32, (1829).—CANDÈZE, Mon., I, pp. 19 & 20, (1857); Rév., p. 1, (1874); Cat. Elat., p. 9, (1891).—REITTER, Best.-Tab., 56, p. 6, (1905).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. pp. 5 & 7, (1906).—C. SCHAUFUSS, in CALWER, Käferb., ed. 6, 1907-16, p. 626, (1911).—JAKOBSON, Žuki Rossiji, 1905-16, p. 735, (1913).

Genotype—Elater tomentosus FABRICIUS, Ent. Syst. Suppl., p. 138 (1798); (*Hab.*—Philippines).

Range—Southern Asia, Africa, Madagascar, Australia and America.
Principally distributed in Oriental and Ethiopian regions.

Genus ADELOCERA LATREILLE

in CUVIER, Régne anim., ed. 2, IV, p. 451, (1829).—CANDÈZE, Mon., I, pp. 14 & 47, (1857); Rév., p. 14, (1874); Cat. Elat., p. 12, (1891).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat., pp. 6 & 10, (1906).—JAKOBSON, Žuki Rossiji, 1905-16, p. 735, (1913).

Alaotypus SCHWARZ, Deutsche Ent. Zeitschr., p. 307, (1902); in WYTSMAN, Gen. Ins., 46, Elat. pp. 6 & 30, (1906).

Genotype—Elater fasciata LINNAEUS, Syst. Nat., ed. 10, I, p. 406, (1758); (*Hab.*—Europe).

Range—Europe, Asia, Africa, Australia and America.

Genus LACON LAPORTE DE CASTELNAU

in SILBERMAN, Rév. Ent., IV, p. 11, (1836).—CANDÈZE, Mon., I, p. 90, (1857); Rév., p. 42, (1874); Cat. Elat., p. 17, (1891).—SCHWARZ, in WYTSMAN, Gen. Ins.

46, Elat., p. 18, (1903).—KUHNT, Illustr. Best.-Tab. Käf. Deutschl., pp. 617 & 621, (1913).

Archontas GOZIS, Recherch. typ., p. 23, (1885).

Brachylacon MOTSCHULSKY, Etud. Ent., VII, p. 60, (1858).—BERGROTH, Ent. Nachr., XIX, p. 303, (1893).—REITTER, Best.-Tab., 56, p. 6, (1905); Fauna Germ., III, pp. 209 & 213, (1911).—C. SCHAUFUSS, in CALWER, Käferb., ed. 6, pp. 626 & 627, (1911).—JAKOBSON, Žuki Rossiji, 1905-16, pp. 735 & 736, (1913).—FLEUTIAUX, Ann. Soc. Ent. Fr., LXXXVII, p. 189, (1918).

Genotype—Elater murinus LINNAEUS, Syst. Nat., ed. 10, I, p. 406, (1758); (*Hab.*—Europe).

Range—Cosmopolitan.

Genus MERISTHUS CANDÈZE

Mon., I, pp. 19 & 162, (1857); Rév., p. 102, (1874); Cat. Elat., p. 26, (1891).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. pp. 5 & 26, (1906).

Trachylacon MOTSCHULSKY (pars), Etud. Ent., VII, p. 61, (1858).

Genotype—Meristhus scobinula CANDÈZE, Mon., I, p. 164, t. 2, f. 26, (1857); (*Hab.*—China).

Range—Madagascar, Africa, Southern Asia and America.

Genus COMPSOLACON REITTER

Best.-Tab., p. 6, (1905).—FLEUTIAUX, Ann. Soc. Ent. Fr., LXXXVII, p. 189. (1918).

Neolacon MIWA, Trans. Nat. Hist. Soc. Formosa, XIX, No. 102, p. 235, (1929).

Genotype—Agrypnus crenicollis MÉNÉTRIÉS, Cat. rais., p. 156, (1832); (*Hab.*—Caucasus).

Range—Caucasus, Russia, Indo-China, China and Formosa.

Genus PARALACON REITTER

Best.-Tab., 56, p. 6, (1905).—FLEUTIAUX, Ann. Soc. Ent. Fr., LXXXVII, p, 189, (1918).

Genotype—Lacon argillaceus SOLSKY, Horae Soc. Ent. Ross., VII, p. 360, (1870) (*Hab.*—East Siberia).

Range—East Siberia, Corea, China, Indo-China and Formosa.

Subfamily HEMIRRHIPINAE FLEUTIAUX

Voy. ALLUAUD & JEANNEL, Afr. or. Col., XIII, pp. 5 & 23, (1919); Trans. Ent. Soc. Lond., pp. 406 & 417, (1911).

Hemirrhipides CANDÈZE, Mon., I, pp. 15 & 199, (1857).

Alaites CANDÈZE, Rév., p. 112, (1874); Cat. Elat., pp. 1 & 28, (1891).

Hemirrhipini REITTER, Best.-Tab., 56, pp. 5 & 6, (1905).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. pp. 4 & 32, (1906).

Alani CHAMPION, Biol. Centr.-Amer. Col., III, p. 269, (1894).—HEYNE & TASCHENBERG, Exot. Käf., p. 152, (1908).

Key to the Genera

1. Body covered with scale-like pile; antennae serrate in both sexes; prosternal sutures furrowed at the anterior part ..... *ALAUS*

1'. Body covered with fine pubescence; antennae lamellate at least in the male; prosternal sutures not furrowed ..... *TETRIGUS*

Genus ALAUS ESCHSCHOLTZ

in THON, Ent., II, 1, p. 33, (1829).—CANDÈZE, Mon. I, pp. 201 & 211, (1857); Rév., p, 117, (1874); Cat. Elat., p. 30. (1891).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. pp. 32 & 35, (1906).

Genotype—Elater oculatus LINNAEUS, Syst. Nat., ed. 19, I, p. 404, (1758); (*Hab.*—North America).

Range—Asia, Africa, Australia, America and Europe.

The Asiatic species are principally located in Oriental regions. There are very few in the Palaearctic region. Only one species is recorded from Southern Europe.

Genus TETRIGUS CANDÈZE

Mon., I, pp. 201 & 454, (1857); Mém. Soc. Sc. Liége, (2) V, p. 6, (1873); Rév., p. 155, (1874); Cat. Elat., p. 36, (1891).—REITTER, Best.-Tab., 56, Elat. p. 8, (1905).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat., pp. 32 & 42, (1906).

Genotype—Tetrigus parallelus CANDÈZE, Mon., I, p. 225, t. 5, f. 5, (1857); (*Hab.*—Bengal).

Range—Asia, New Guinea and Natal.

Subfamily CHALCOLEPIDIINAE SCHENKLING

Col. Cat., 80, Elat. I, p. 54, (1925).

Chalcolepidiides LACORDAIRE, Gen. Col., IV, pp. 137 & 153, (1857).—CANDÈZE, Mon., I, pp. 16 & 257, (1857).

Chalcolepidiites CANDÈZE, Rév., p. 160, (1874); Cat. Elat., pp. 1 & 37, (1891).

Chalcolepidiini CHAMPION, Biol. Centr.-Amer. Col., III, p. 272, (1894).—SCHWARZ, in

WYTSMAN, Gen. Ins., 46, Elat. pp. 3 & 43, (1906).—HEYNE & TASCHENBERG, Exot. Käf., p. 153, (1908).

Chalcolepidiina LENG, Cat. Col. Amer., p. 167, (1920).

Genus **CAMPSOSTERNUS** LATREILLE

Ann. Soc. Ent. Fr., III, p. 141, (1834).—HOPE, Ann. Mag. Nat. Hist., VIII. p. 453, (1842); Trans. Ent. Soc. Lond., III, p. 286, (1843).—CANDÈZE, Mon., I, p. 340, (1857); Rév., p. 189, (1874).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat., pp. 32 & 50, (1906).

Genotype—Elater fulgens OLIVIER, Ent., II, Nr. 31, p. 12, t. 4, f. 43, (1970); (*Hab.*—China).

Range—Widely distributed in Oriental region.

Subfamily **OXYNOPTERINAE** SCHENKLING

in JUNK, Col. Cat., 80, Elat. p. 68, (1925).

Oxynopterides CANDÈZE, Mon., I, pp. 16 & 355, (1857).—LACORDAIRE, Gen. Col., IV, pp. 137 & 158, (1857).

Oxynopterites CANDÈZE, Rév., p. 205, (1874); Cat. Elat., p. 46, (1891).

Oxynopterini SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. pp. 4 & 54, (1906).—HEYNE & TASCHENBERG, Exot. Käf., p. 155, (1908).

Genus **PECTOCERA** HOPE

Proc. Zool. Soc. Lond., p. 79, (1842).—CANDÈZE, Mon., I, pp. 357 & 361. (1857); Rév., p. 207, (1874); Cat. Elat., p. 47, (1891).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. pp. 54 & 56, (1906).

Genotype—Pectocera cantori HOPE, Proc. Zool. Soc. Lond., p. 79, (1842); (*Hab.*—Bengal).

Range—India, Indo-China, China, Formosa, Loo-Choo and Japan.

Subfamily **DICREPIDIINAE** FLEUTIAUX

Voy. ALLUAUD & JEANNEL, Afr. or. Col., XIII, pp. 5 & 38, (1919); Trans. Ent. Soc. Lond., pp. 407 & 428, (1922).

Elaterides vrais (pars) LACORDAIRE, Gen. Col., IV, pp. 137 & 167, (1857).

Dicrêpidiites CANDÈZE, Mon. II, pp. 3 & 5, (1859); Cat. Elat., p. 49, (1891).

Dicrepidiini CHAMPION, Biol. Centr-Amer. Col., III, p. 292, (1895).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. pp. 4 & 59, (1906).—HEYNE & TASCHENBERG, Exot. Käf., p. 155, (1908).

Genus **SEPHILUS** CANDÈZE

Ann. Mus. Genova, XII, p. 108, (1878); Cat. Elat., p. 56, (1891).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat., pp. 60 & 70, (1906).

Genotype—Sephilus frontalis CANDÈZE, Ann. Mus. Genova, XII, p. 109, (1878); (*Hab.*—Malacca).

Range—Malay archipelago, Formosa and Loo-Choo.

Subfamily **CONODERINAE** FLEUTIAUX

Voy. ALLUAUD & JEANNEL, Afr. or. Col., XIII, pp. 6 & 58, (1919); Trans. Ent. Soc. Lond., p. 407, (1922); Encycl. Ent. Col., p. 13, (1929).

Monocrepidiites CANDÈZE, Mon., II, p. 170, (1859); Cat. Elat., p. 67, (1891).

Monocrepidiidae FLEUTIAUX, Ann. Soc. Ent. Fr., LX, p. 387, (1891).

Monocrepidiini CHAMPION, Biol. Centr.-Amer. Col., III, p. 341, (1895).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. p. 88, (1906).—HEYNE & TASCHENBERG, Exot. Käf., p. 157, (1908).

Monocrepidiina LENG, Cat. Col. America, p. 167, (1920).

Key to the Genera

1. Third tarsal joint dilated below, smaller than the fourth.....*ANATHESIS*
1′. Third tarsal joint normal, the fourth lamellate.....(2)
2. Pronotal posterior angles not carinate.....*AEOLODERMA*
2′. Pronotal posterior angles carinate.....(3)
3. Pronotum with fine even punctation.....*PRODRASTERIUS*
3′. Pronotum with double kinds of punctations, in which large punctures sparsely set among dense minute punctulation.....*HETERODERES*

Genus **ANATHESIS** CANDÈZE

Elat. Nouv., I, p. 21, (1865); Cat. Elat., p. 54, (1891).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. pp. 83 & 84, (1906).

Genotype—Anathesis laconoides CANDÈZE, Elat. Nouv., I, p. 21, (1865); (*Hab.*—Malacca).

Range—Malay archipelago, Indo-China, Hainan, Formosa and New Guinea.

Genus **PRODRASTERIUS** FLEUTIAUX

Bull. Soc. Ent. Fr., pp. 91 & 92, (1927); Encycl. Ent., Col. p. 35, (1929).

Genotype—Drasterius brahminus CANDÈZE, Mon., II, pp. 422 & 426, (1959); (*Hab.*—Himalaya).

Range—Oriental region.

Genus AEOLODERMA FLEUTIAUX

Encycl. Ent., Col. p. 33, (1929).

Genotype—*Elater crucifer* ROSSI, Faune Etr., I, p. 183, t. 5, f. 9, (1790); (*Hab.*—Europe).

Range—Cosmopolitan.

Genus HETERODERES LATREILLE

Ann. Soc. Ent. Fr., p. 155, (1834).—CANDÈZE, Mon. Elat., II, pp. 180 & 350, (1850); Cat. Elat., p. 82, (1891).—REITTER, Best.-Tab., 56, p. 11, (1905).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. pp. 89 & 105, (1906).—C. SCHAUFUSS, in CALWER, Käferb., ed. 6, 1907-16, p. 650, (1911).—FLEUTIAUX, Bull. Soc. Ent. Fr., pp. 90, 92 & 105. (1927); Encycl. Ent., Col. p. 24, (1929).

Genotype—*Heteroderes fuscus* LATREILLE, Ann. Soc. Ent. Fr., III, p. 155, (1834); (*Hab.*—Guinea).

Range—Cosmopolitan.

Subfamily ELATERINAE C. SCHAUFUSS

in CALWER, Käferb., ed. 6, 1907-16, p. 649, (1911).—JAKOBSON, Žuki Rossiji, 1905-16, pp. 734 & 748, (1913).—FLEUTIAUX, Voy ALLUAUD & JEANNEL, Afr. or. Col., XIII, pp. 5 & 65, (1919); Trans. Ent. Soc. Lond., pp. 407 & 418, (1922); Encycl. Ent., Col. p. 43, (1929).

Elaterides vrais LACORDAIRE, Gen. Col., IV, pp. 137 & 166, (1857).

Elaterites CANDÈZE, Mon., II, p. 413, (1859); Cat. Elat., pp. 3 & 86, (1891).

Elaterides C. G. THOMSON, Skand. Col., VI, p. 76, (1864).

Elateridae FLEUTIAUX, Ann. Soc. Ent. Fr., LX, p. 387, (1891).

Elaterini CHAMPION, Biol. Centr.-Amer. Col., III, p. 375, (1894).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. pp. 4 & 109, (1906).—HEYNE & TASCHENBERG, Exot. Käf., p. 158, (1908).

Elaterina REITTER, Best.-Tab., 56, pp. 5 & 9, (1905).—LENG, Cat. Amer. Col., p. 173, (1920).

Key to the Genera

1. Prosternal sutures canaliculate.....*ELATER*
1′. Prosternal sutures not canaliculate.....(2)
2. Second and third antennal joints short, nearly equal in size.....(3)
2′. Second antennal joint shortest, the third longer than the second and nearly as long as the fourth.....*XANTHERATER*

3. Elytra excavate or sometimes truncate at the apical extremities.....(4)
3′. Elytra usually perfect at the apex .....*MEGAPENTHES*
4. Antennae thickly serrate.....*MELANOXANTHUS*
4′. Antennae subfiliform, compressed.....*PENGAMETHES*

Genus ELATER LINNAEUS

Syst. Nat., ed. 10, I, p. 404, (1758); ed. XII, I, p. 651, (1767).—CANDÈZE, Mon., II, p. 436, (1859).—REITTER, Ent. Nachr., XV, p. 110, (1889); Best.-Tab., 56, p. 12, (1905); Fauna Germ., III, pp. 212 & 237, (1911); Wien. Ent. Zeit., XXXVII, p. 81, (1918).—Rye, Ent. Monthl. Mag., II (2), p. 72, (1903).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. p. 114, (1906).—C. SCHAUFUSS, in CALWER, Käferb., ed. 6, 1907-16, pp. 650 & 652, (1911).—KUHNT, Illustr. Best.-Tab. Käf. Deutschl., pp. 619 & 632, (1913).

Ampedus GERMAR, Zeitschr. Ent., V, p. 153, (1844).

Parelater CANDÈZE, Elat. nouv., III, p. 70, (1881).

Key to the Subgenera

1. Pronotal posterior angles with single carina respectively.....(2)
1′. Pronotal posterior angles with double carinae respectively ...*ECTAMENOGONUS*
2. Antennal third joint shorter than the fourth and different shaped from the latter .....*ELATER*
2′. Antennal third joint similar to the fourth in the shape and size...*PSEUDELATER*

Subgenus ELATER s. str.

Subgenotype—*Elater sanguineus* LINNAEUS, Syst. Nat., ed. 10, I, p. 405, (1758); (*Hab.* Europe).

Range—Europe, Asia, Australia, Polynesia, Madagascar and North America.

Subgenus ECTAMENOGONUS BUYSSON

Proc. Roy. Soc. Ent. Fr., p. 314, (1893).—C. SCHAUFUSS, in CALWER, Käferb., ed. 6, 1907-16, p. 653, (1911).—REITTER, Wien. Ent. Zeit., XXXVII, pp. 84 & 104, (1918).

Subgenotype—*Steatoderus montandoni* BUYSSON, Bull. Soc. Ent. Fr., p. 202, (1888); (*Hab.*—Bukarest).

Range—Palaearctic.

Subgenus **PSEUDELATER** MIWA (nov.)

In general structures, this closely corresponds with the true *Elater*, but differs by the antennal third joint relatively longer and similar to the fourth in the shape and size.

Subgenotype—Elater habunensis MIWA, (nov.); (*Hab.*—Formosa) (present designation).

Range—Formosa.

Genus **XANTHELATER** MIWA

Trans. Nat. Hist. Soc. Formosa, XXI, No. 116, p. 259, (1931).

Genotype—Elater granulipennis MIWA, ibid., XIX, No. 105, p. 489, (1929); (*Hab.*—Formosa).

Range—Formosa and Loo-Choo.

Genus **MEGAPENTHES** KIESENWETTER

Naturgesch. Ins. Deutschl., IV, 1857-63, pp. 229 & 353, (1858).—CANDÈZE, Mon., II, pp. 416 & 491, (1859); Elat. nouv., IV, p. 35, (1889); Cat. Elat., p. 95, (1891).—REITTER, Ent. Nachr., XXIV, p. 180, (1898); Best.-Tab., 56, p. 11, (1905); Fauna Germ., III, p. 212, (1911).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. pp. 110 et 122, (1906).—FLEUTIAUX, Encycl. Ent., Col. p. 45, (1929).

Ampedus GERMAR (pars), Zeitschr. Ent., V, pp. 169 & 177, (1844).

Ectinus ESCHSCHOLTZ, in THON, Ent. Arch., II, 1, p. 34, (1828).

Genotype—Elater lugens REDTENBACHER, Gen. et spec. Col. Austr., p. 11, (1842); (*Hab.*—Europe).

Range—Cosmopolitan.

Genus **MELANOXANTHUS** ESCHSCHOLTZ

in SILBERMAN, Rév. Ent., IV, Tab. (1836).—GERMAR, Zeitschr. Ent., V, p. 191, (1844).—CANDÈZE, Mon., II, pp. 416 & 510, (1859); Elat. nouv., IV, p. 35, (1889); Cat. Elat., p. 99, (1891).—SCHWARZ, in WYTSMAN, Gen Ins., 46, Elat. pp. 110 & 126, (1906).—JAKOBSON, Žuki Rossiji, 1905-16, pp. 748 & 751, (1913).—FLEUTIAUX, Voy. ALLUAUD & JEANNEL, Afr. or. Col., XIII, pp. 65 & 69, (1919); Trans. Ent. Soc. Lond., pp. 418 & 424, (1922); Encycl. Ent., Col. p. 45, (1929).

Key to the Subgenera

1. Second and third joints of antennae short, subglobose and smaller than each of others; basal plates narrowed outwards.....*MELANOXANTHUS* (s. str.)
1′. Third joint of antennae distinctly longer than the second and generally similar to the fourth in the shape and size.....*GANOXANTHUS*

Subgenus **MELANOXANTHUS** s. str.

Subgenotype—Elater melanocephalus FABRICIUS, Spec. Ins., I, p. 272, (1781); (*Hab.* India).

Range—Arabia, India, Malay peninsula and archipelago, Birma, Siam, Indo-China, Philippines, Formosa, Loo-Choo, Japan, Australia, Africa, Siéra-Leonne, Madagascar, New-Zealand and Brasil.

Subgenus **GANOXANTHUS** FLEUTIAUX

Encycl. Ent., Col. p. 54, (1929).

Subgenotype—Melanoxanthus virgatus CANDÈZE, Ann. Mus. Genova, (2) XII, p. 777, (1891); (*Hab.*—Bengal).

Range—India, Birma, Indo-China and Formosa.

Genus **PENGAMETHES** FLEUTIAUX

Encycl. Ent., Col. p. 71, (1929).

Genotype—Pengamenthes fulvicollis FLEUTIAUX, ibid., p. 74; (*Hab.*—Tonkin).

Range—Indo-China, Formosa and Japan.

Subfamily **PHYSORRHININAE** FLEUTIAUX

Voy. ALLUAUD & JEANNEL, Afr. or. Col., XIII, pp. 5 & 71, (1919).

Physorhinites CANDÈZE, Mon., II, p. 384, (1859); Cat. Elat., p. 103, (1891).

Physorrhinini SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat., pp. 4 & 131, (1906).—HEYNE & TASCHENBERG, Exot. Käf., p. 158, (1908).

Genus **ANCHASTUS** J. LECONTE

Trans. Amer. Philos. Soc., (n. s.) X, p. 459, (1853).—CANDÈZE, Mon., II, pp. 387 & 397, (1859); Cat. Elat., p. 104, (1891).—REITTER, Best.-Tab., 56, p. 11, (1905); Fauna Germ., III, pp. 212 & 237, (1911).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. pp. 131 & 133, (1906).—C. SCHAUFUSS, in CALWER, Käferb., ed. 6, 1907-16, p. 650, (1911).—KUHNT, Illustr. Best.-Tab. Käf. Deutschl., pp. 619 & 631, (1913).—JAKOBSON, Žuki Rossiji, 1905-16, p. 747, (1913).—FLEUTIAUX, Encycl. Ent., Col. p. 38, (1929).

Crepidotritus J. LECONTE, Classif. Col. N. Amer., I, p. 167, (1861).—FLEUTIAUX, Trans. Ent. Soc. Lond., p. 432, (1922).

Monelasmus CANDÈZE (pars), Mon., IV, p. 332, (1863).

Podeonius KIESENWETTER, Naturgesch. Ins. Deutschl., IV, 1857-63, pp. 229 & 349, nota (1858).

Genotype—*Anchastus digitatus* LECONTE, Trans. Amer. Philos. Soc., (2) X, p. 459, (1853); (*Hab.*—North America).

Range—Cosmopolitan (except the northern part of Palaearctic region).

Subfamily HYPNOIDINAE FLEUTIAUX

Voy. ALLUAUD & JEANNEL, Afr. or. Col., XIII, pp. 5 & 74, (1919).

Cryptohypnites CANDÈZE, Mon., III, p. 50, (1860); Cat. Elat., pp. 4 & 113, (1891).

Cryptohypnini CHAMPION, Biol. Centr.-Amer. Col., III, p. 407, (1895).—HEYNE & TASCHENBERG, Exot. Käf., p. 159, (1908).

Hypnoidini SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. p. 150. (1906).—LENG, Cat. Col. Amer., p. 171, (1910).

Cardiophorinae REITTER (pars), Best.-Tab., 56, p. 9, (1905).—C. SCHAUFUSS, in CALWER, Käferb., ed. 6, 1907-16, pp. 626 & 642, (1911).

Hypnoidina JAKOBSON, Žuki Rossiji, 1905-16, pp. 734 & 751, (1913).

Key to the Genera

1. Prosternal sutures partly or perfectly obliterated.....*ARRHAPHES*
1′. Prosternal sutures conspicuous.....(2)
2. Prosternal sutures straight, single and perfectly closed; prosternum parallel sided, scarcely wider than propleuron.....(3)
2′. Prosternal sutures arcuate double and more or less canaliculate; prosternum conspicuously wider than propleuron.....(5)
3. Pronotal posterior carina distinct, often extends forwards and reaches the anterior margin.....*CRYPNOIDUS*
3′. Pronotal posterior carina fine and short.....(4)
4. Body short, convex and rather oval, brilliant on the upper surface; pronotum finely and sparsely punctulate, with the sides somewhat sinuous before the base, the hind angles very slightly diverged.....*HYPNOIDUS*
4′. Body elongate, depressed and not brilliant on the upper surface; pronotum densely but unevenly punctulate, the hind angles acuminate and diverged; basal joint of each antenna remarkably expanded.....*SCOLIOCERUS*
5. Prosternal sutures broadly furrowed, arcuate and somewhat carinate on each side of the furrow; pronotal posterior carina distinct, extends forwards and reaches the anterior border; elytra not striate; the fifth tarsal joint inserted on the dilated fourth.....*QUASIMUS*
5′. Prosternal sutures narrowly separated and slightly canaliculate; pronotal posterior carina not extends anteriorly; elytra striate; the fourth tarsal joint not dilated.....(6)

6. Body elongate; pronotum finely, regularly and densely punctulate on the whole surface, not rugose; elytra distinctly wider than pronotum; basal plates gradually dilated inwards.....*CURTISIUS*
6′. Body short; pronotum coarsely punctulate on the whole surface, with a longitudinal median line; elytra not wider than pronotum; basal plates suddenly dilated inwards.....*ZOROCHRUS*

Genus ARRHAPHES CANDÈZE

Mon., III, pp. 52 et 98, (*Arhaphes*) (1860); Cat. Elat., p. 120, (1891).—SCHWARZ, Deutsche Ent. Zeitschr., p. 89, Nota 1, (1900); in WYTSMAN, Gen. Ins., 46, Elat., pp. 150 & 158, (1906).—JAKOBSON, Žuki Rossiji, 1905-16, pp. 751 & 753, (1913).

Hemirrhaphes CANDÈZE, Elat. nouv., II, p. 32, (1878); Cat. Elat., p. 120, (1891).—SCHWARZ, Deutsche Ent. Zeitschr., p. 89, nota 1, (1900).

Pharotarsus MOTSCHULSKY, Bull. Soc. Nat. Moscou, XXXIV, I, p. 119, (1861).

Genotype—*Arhaphes dyptychus* CANDÈZE, Mon., III, p. 99, t. 2, f. 8, (1860); (*Hab.*—Ceylon).

Range—India, Ceylon, Malay archipelago, Indo-China, Formosa, America, Africa and Madagascar.

Genus HYPNOIDUS STEPHENS

Illustr. Brit. Ent. Mand., III, p. 260, (1830).—REITTER, Ent. Nachr., XXI, p. 87, (1895); Best.-Tab., 56, p. 9, (1905); Fauna Germ., III, pp. 211 & 233, (1911).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. pp. 150 & 151, (1906).—C. SCHAUFUSS, in CALWER, Käferb., ed. 6, 1907-16, pp. 642 & 643, (1911).—KUHNT, Illustr. Best.-Tab. Käf. Deutschl., pp. 620 & 627, (1913).—JAKOBSON, Žuki Rossiji, 1905-16, pp. 751 & 752, (1913).

Hypolithus (nec DEJEAN, in *Carabidae*) ESCHSCHOLTZ, in THON, Ent. Arch., II, 1, p. 33, (1829) (Genotype: *Hypolithus littoralis* ESCHSCHOLTZ).

Cryptohypnus ESCHSCHOLTZ (pars), in DEJEAN, Cat., ed. 3, p. 93, (1833); in SILBERMANN, Rév. Ent., IV, (1836) (in table without species).—CANDÈZE, Mon., III, pp. 52 & 55, (1860).—REITTER, Best.-Tab., 56, p. 9, (1905); Wien Ent. Zeit., XXIX, p. 174, (1910); Fauna Germ., III, p. 233, (1911).—C. SCHAUFUSS, in CALWER, Käferb., ed. 6, 1907-16, p. 642, (1911).—KUHNT, Illustr. Best.-Tab. Käf. Deutschl., pp. 620 & 627, (1913).—JAKOBSON, Žuki Rossiji, 1905-16, pp. 751 & 752, (1913) (Genotype: *H. littoralis* ESCHSCHOLTZ).

Genotype—*Elater riparius* FABRICIUS, Ent. Syst., I, 2, p. 232, (*Elater*) (1792); (*Hab.*—Europe).

Range—Cosmopolitan.

Genus CRYPNOIDUS FLEUTIAUX

Bull. Soc. Ent. Fr., p. 252, (1928); Misc. Ent., XXXI, p. 94, (1929).

Genotype—*Quasimus setosus* BUYSSON, Col. Rundschau, III, p. 42, (1914); (*Hab.*—Turkestan).

Range—Palaearctic.

Genus SCOLIOCERUS MOTSCHULSKY

Mém. Biol. Acad. St. Petersb., III, p. 227, (1859).—FLEUTIAUX, Misc. Ent., XXXI, p. 94, (1929).

Genotype—*Scoliocerus basalis* MOTSCHULSKY, Mém. Biol. Acad. St. Petersb., III, p. 227, (1859); (*Hab.*—Siberia).

Range—Palaearctic.

Genus CURTISIUS nom. nov.

Aplotarsus (nec. STEPHENS, 1830) CURTIS, Trans. Ent. Soc. Lond., III, p. 15, (1854).—FLEUTIAUX, Misc. Ent., XXXI, p. 94, (1929).

Genotype—*Aplotarsus maritimus* CURTIS, Ann. Mag. Nat. Hist., V, p. 277, (1840); (*Hab.*—Europe).

Range—Palaearctic and Nearctic.

Genus ZOROCHRUS C. G. THOMSON

Skand. Col., I, 106, (*Zorochros*) (1859); ibid., VI, p. 116, (1864).—REITTER, Fauna Germ., III, p. 233, (1911); Ent. Nachr., XXI, p. 87, (1895).—C. SCHAUFUSS, in CALWER, Käferb., ed. 6, 1907–16, p. 643, (1911).—KUHNT, Illustr. Best.-Tab. Käf. Deutschl., p. 627, (1913).—FLEUTIAUX, Misc. Ent., XXXI, p. 94, (1929).

Genotype—*Elater dermestoides* HERBST, Natursyst. Ins. Käf., X, p. 85, t. 165, f. 10, (1806); (*Hab.*—Europe).

Range—Palaearctic.

Genus QUASIMUS GOZIS

Recherch. typ., p. 22, (1886).—REITTER, Fauna Germ., III, pp. 211 & 234, (1911).—C. SCHAUFUSS, in CALWER, Käferb., ed. 6, 1907–16, p. 643, (1911).—FLEUTIAUX, Misc. Ent., XXXI, p. 93, (1929).

Genotype—*Elater minutissimus* GERMAR, Fauna Ins. Eur., VI, nr. 8, (1822); (*Hab.*—Europe).

Range—Europe, Japan, Formosa, Sumatra, Turkestan and Caucasus.

Subfamily ESTHESOPINAE FLEUTIAUX

FLEUTIAUX, Voy. ALLUAUD & JEANNEL, Afr. or. Col., XIII, pp. 5 & 76, (1919); Trans. Ent. Soc. Lond., p. 413, (1922); Bull. Soc. Zool. Fr., LVI, p. 306, (1931).

Cardiophorites CANDÈZE, Mon., III, p. 100, (1860); Cat. Elat., pp. 4 & 120, (1891).

Cardiophorini CHAMPION, Biol. Centr.-Amer. Col., III, p. 415, (1895).—REITTER, Best.-Tab., 56, pp. 5 & 9, (1905).—SCHWARZ in WYTSMAN, Gen. Ins., 46, Elat. pp. 626 & 642, (1906).—HEYNE & TASCHENBERG, Exot. Käf., p. 159, (1908).—C. SCHAUFUSS, in CALWER, Käferb., ed. 6, 1907–16, pp. 626 & 642, (1911).

Cardiophorinae LENG, Cat. Col. Amer., p. 175, (1910).

Key to the Genera

1. Propleura with a longitudinal furrowed line in the middle respectively, which divided the pleuron into two parts; basal furrow of the pronotum prolonged anteriorly along the lateral margin to the anterior border; claws simple..... ..... *CARDIOHYPNUS*

1′. Propleura without such furrow; pronotum with a pair of short basal furrows only..... (2)

2. Tarsal joint usually simple, the fourth jointed to the fifth with the end respectively..... (3)

2′. Fourth tarsal joint dilated below; the fifth jointed on the fourth; claws simple... ..... *CARDIOTARSUS*

3. Claws simple, with the inner sides more or less sinuous..... (4)

3′. Claws dentate or bifurcate..... (5)

4. Pronotum without lateral margin, but with a fine suture on the pleuron of each side, which commences at the hind angles and extends forwards..... ..... *CARDIOPHORUS*

4′. Pronotum with more or less distinct lateral margin..... ..... *PARACARDIOPHORUS*

5. Claws dentate, with the inner sides semicircularly excavate..... ..... *PLATYNYCHUS*

5′. Claws bifurcated; pronotum without lateral margin..... ..... *PHOROCARDIUS*

Genus CARDIOHYPNUS FLEUTIAUX

Bull. Soc. Ent. Fr., p. 282, (1928); Bull. Soc. Zool. Fr., LVI, pp. 305 & 307, (1931).—MIWA, Trans. Nat. Hist. Soc. Formosa, XX, No. 106, pp. 4 & 11, (1930).

Genotype—*Cardiophorus mirabilis* CANDÈZE, Mon., III, p. 142, (1860). (*Hab.*—India).

Range—India, Indo-China and Formosa.

Genus PHOROCARDIUS FZEUTIAUX

Bull. Soc. Zool. Fr., LVI, pp. 307 & 308, (1901).

Genotype—Cardiophorus florentini FLEUTIAUX, Ann. Soc. Ent. Fr., p. 687, (1894); (*Hab.*—Tonkin).

Range—India, Indo-China and Formosa.

Genus CARDIOPHORUS ESCHSCHOLTZ

in THON, Ent. Arch., II, 1, p. 34, (1829).—LACORDAIRE, Gen. Col., IV, pp. 168 & 193, (1857).—CANDÈZE, Mon., III, pp. 104 & 106, (1860); Cat. Elat., p. 121, (1891).—REITTER, Best.-Tab. 56, p. 9, (1905); Fauna Germ., III, pp. 211 & 230, (1911).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. p. 162, (1906).—C. SCHAUFUSS, in CALWER, Käferb., ed. 6, 1906-16, pp. 642 & 645, (1911).—KUHNT, Illustr. Best.-Tab. Käf. Deutschl., pp. 620 & 629, (1913).—JAKOBSON, Žuki Rossiji, 1905-16, p. 761, (1913).—FLEUTIAUX, Voy. ALLUAUD & JEANNEL, Afr. or. Col., XIII, p. 76, (1919); Bull. Soc. Zool. Fr., LVI, pp. 306 & 312, (1931).—MIWA, Trans. Nat. Hist. Soc. Formosa, XX, No. 103, pp. 4 & 7, (1930).

Genotype—Elater gramineus SCOPOLI, Ent. Carniol., p. 95, (1763); (*Hab.*—Europe).

Range—Cosmopolitan.

Genus PARACARDIOPHORUS SCHWARZ

Deutsche Ent. Zeitschr., p. 40, (1895); in WYTSMAN, Gen. Ins., 46, Elat., p. 172, (1906).—REITTER, Best.-Tab., 56, p. 9, (1905); Fauna Germ., III, pp. 211 et 233, (1911).—C. SCHAUFUSS in CALWER, Käferb., ed. 6, 1907-16, pp. 101 & 112, (1911).—JAKOBSON, Žuki Rossiji, 1905-16, pp. 761 & 763, (1913).

Genotype—Cardiophorus musculus ERICHSON, Zeitschr. Ent., II, p. 299, (1840); (*Hab.*—South Europe).

Range—Cosmopolitan.

Genus PLATYNYCHUS MOTSCHULSKY

Etud. Ent., VII, p. 59, (1858).—REITTER, Fauna Germ., III, p. 232, (1911).—C. SCHAUFUSS, in CALWER, Käferb., ed. 6, 1907-16, p. 646, (1911).—KUHNT, Illustr. Best.-Tab. Käf. Deutschl., p. 269, (1913).—FLEUTIAUX, Bull. Soc. Zool. Fr., LVI, p. 315, (1931).

Gauroderus C. G. THOMSON, Skand. Col., I, p. 104, (1859).

Genotype—Platynychus pictus MOTSCHULSKY, Etud. Ent., VII, p. 58, (1858); (*Hab.*—Ceylon).

Range—Asia, Europe and Africa.

Genus CARDIOTARSUS LAPORTE DE CASTELNAU

(nec. ESCHSCHOLTZ) in SILBERMANN, Rév. Ent., IV, p. 4, (1936) (in table without species).—LACORDAIRE, Gen. Col., IV, pp. 168 & 192, (1857).—CANDÈZE, Mon., III, pp. 104 & 323, (1860); Cat. Elat., p. 133, (1891).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. p. 174, (1906).—FLEUTIAUX, Voy. ALLUAUD & JEANNEL, Afr. or. Col., XIII, pp. 76 & 97, (1919); Bull. Soc. Zool. Fr., LVI, pp. 307 & 328, (1931).—MIWA, Trans. Nat. Hist. Soc. Formosa, XX, No. 106, p. 4, (1930).

Genotype—Cardiotarsus capensis CANDÈZE, Mon., III, p. 226, (1860); (*Hab.*—Cap.).

Range—Oriental, Ethiopian and Madagascan regions.

Subfamily MELANOTINAE JAKOBSON

Žuki Rossiji, 1906-16. pp. 734 & 753, (1913).

Melanotites CANDÈZE, Mon., II, p. 4, (1859); ibid., III, p. 287, (1860); Cat. Elat., p. 139, (1891).

Melanotini CHAMPION, Biol. Centr.-Amer. Col., III, p. 446, (1895).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. pp. 4 & 182, (1906).—HYSLOP, Ann. Ent. Soc. Amer., X, p. 257, (1917).

Key to the Genera

1. Third tarsal joint dilated ..... *PSELLIS*
1′. Tarsal joints usually simple ..... (2)
2. Prosternal process horizontal ..... *SPHENISCOSOMUS*
2′ Prosternal process gradually or suddenly curved inwards behind the fore coxal cavities ..... (3)
3. Basal plates dentate at the centre of margin; prosternal sutures not canaliculate ..... *NEODIPLOCONUS*
3′. Basal plates not dentate; prosternal sutures more or less canaliculate ..... (4)
4. Prosternal sutures through canaliculate ..... *METRIAULACUS*
4′. Prosternal sutures canaliculate on the anterior half ..... (5)
5. Prosternal process suddenly bent at right angle behind the fore coxal cavities... ..... *CREMNOSTETHUS*
5′. Prosternal process gradually and gently curved inwards ..... *MELANOTUS*

Genus PSELLIS CANDÈZE

Mon., III, p. 289, (1860); Caf. Elat., p. 139, (1891).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. pp. 182 & 183, (1906).—MIWA, Ins. Mats., II, No. 2, p. 106, (1927); Trans. Nat. Hist. Soc. Formosa, XX, No. 107, p. 57, (1930).

Genotype—Cratonychus promiscuus ERICHSON, GERMAR's Zeitschr. Ent., III, p. 112, (1841); (*Hab.*—Île de France).

Range—Île de France, Bourbon and Formosa.

Genus NEODIPLOCONUS HYSLOP

Proc. U. S. Nat. Mus., LVIII, p. 653, (1921).—MIWA, Ins. Mats., II, No. 2, p. 105, (1927); Trans. Nat. Hist. Soc. Formosa, XX, No. 107, p. 58, (1930).

Cratonychus ERICHSON (pars), Zeitschr. Ent., III, p. 109, (1841).

Diploconus CANDÈZE, Mon., III, pp. 289 & 290, (1860); Cat. Elat., p. 139, (1891).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. pp. 182 & 183, (1906).—JAKOBSON, Žuki Rossiji, 1905–16, pp. 753 & 754, 1913).

Genotype—Diploconus peregrimus CANDÈZE, Mon., III, p. 293, (1860); (*Hab.*—Malay archipelago).

Range—Oriental region and Oceania.

Genus SPHENISCOSOMUS SCHWARZ

Wien. Ent. Zeit., XI, p. 132, (1892); Deutsche Ent. Zeitschr., pp. 145 & 149, (1892); in WYTSMAN, Gen. Ins., 46, Elat. p. 185, (1906).—C. SCHAUFUSS, in CALWER, Käferb., ed. 6, 1907–16, p. 651, (1911).—JAKOBSON, Žuki Rossiji, 1905–16, p. 753, (1913).—MIWA, Ins. Mats., II, No. 2. p. 106, (1927); Trans. Nat. Hist. Soc. Formosa, XX, No. 107, pp. 57 & 60, (1930).

Melanotopsis LEWIS, Ann. Mag. Nat. Hist., (6) XIII, p. 191, (1894); ibid., (6) XVII, p. 336, (1896).

Genotype—Melanotus cuneiformis BAUDI, Berl. Ent. Zeitschr., XV, p. 53, (1871); (*Hab.*—Cyprus).

Range—Southern Europe, Asia, Oceania and North America.

Genus MELANOTUS ESCHSCHOLTZ

in THON, Ent. Arch., II, 1, p. 32, (1829).—CANDÈZE, Mon., III, p. 298, (1860).—REITTER, Wien. Ent. Zeit., X, p. 235, (1891); Best.-Tab., 56, p. 9, (1905).—SCHWARZ, Deutsche Ent. Zeitschr., pp. 145 & 151, (1872); in WYTSMAN, Gen. Ins., 46, Elat. p. 186 (1906).—LEWIS, Ann. Mag. Nat. Hist., (6) XVII, p. 336, (1896).—C. SCHAUFUSS, in CALWER, Käferb., ed. 6, pp. 649, 650 & 651, (1911).—KUHNT, Illustr. Best.-Tab. Käf. Deutschl., pp. 618 & 627, (1913).—JAKOBSON, Žuki Rossiji, 1905–16, pp. 753 & 754, (1913).—MIWA, Ins. Mats., II, No. 2, p. 106, (1927); Trans. Nat. Hist. Soc. Formosa, XX, No. 107, pp. 57 & 62, (1930).

Genotype—Elater fusciceps GYLLENHAL, in SCHÖNHERR, Syn. Ins., I, 3, Append. p. 135, (1817); (*Hab.*—Dalmatia).

Range—Cosmopolitan (except South America).

Genus CREMNOSTETHUS SCHWARZ

Deutsche Ent. Zeitschr., p. 197, (1907); in WYTSMAN, Gen. Ins., 46, Elat. p. 191, (1906).—JAKOBSON, Žuki Rossiji, 1905–16, pp. 753 & 755, (1913).—MIWA, Ins. Mats., II, No. 2, p. 106, (1927); Trans. Nat. Hist. Soc. Formosa, XX, No. 107, pp. 57 & 62, (1930).

Genotype—Cremnostethus nigricollis SCHWARZ, Deutsche Ent. Zeitschr., p. 197; (*Hab.*—Assam).

Range—North India and Formosa.

Genus METRIAULACUS SCHWARZ

Deutsche Ent. Zeitschr., p. 198, (1901); in WYTSMAN, Gen. Ins. 46, Elat. p. 191, (1906).—MIWA, Ins. Mats., II, No. 2, p. 106, (1927); Trans. Nat. Hist. Soc. Formosa, XX, No. 107, pp. 57 & 65, (1930).

Genotype—Metriaulacus nigrolaterus SCHWARZ, Deutsche Ent. Zeitschr., p. 198, (1901); (*Hab.*—Borneo).

Range—India, Malay archipelago and Formosa.

Subfamily ATHOINAE C. SCHAUFUSS

in CALWER, Käferb., ed. 6. 1907–16, p. 657, (1911).—FLEUTIAUX, Encycl. Ent., Col. p. 9, (1929).

Athoites CANDÈZE, Mon., II, p. 4, (1859); ibid., III, p. 375, (1860); Cat. Elat., p. 146, (1891).

Athoina CHAMPION, Biol. Centr.-Amer. Col., III, p. 455, (1895).

Athouinae REITTER, Best.-Tab., 56, pp. 5 & 12, (1905).—LENG, Cat. Col. Amer., p. 168, (1920).

Athoini HEYNE & TASCHENBERG, Exot. Käf., p. 160, (1908).

Limoiina JAKOBSON, Žuki Rossiji, 1906–16, pp. 734 & 755, (1913).

Athouina SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. p. 191, (1906).—HYSLOP, Ann. Ent. Soc. Amer., X, p. 253, (1917).

Key to the Genera

1. Pronotum parallel sided. deeply and longitudinally furrowed in the middle from the base to the anterior margin ..... *PARATHOUS*
1′. Pronotum without such furrow ..... (2)
2. Prosternal sutures double ..... (3)
2′. Prosternal sutures single and closed through ..... (5)

3. Prosternal sutures closed through.....*PHELETES*
3'. Prosternal sutures furrowed at the anterior part.....(4)
4. Basal rim of each propleuron emarginate like a nail-shape near the hind angles ..... *LIMONISCUS*
4'. Basal rim of each propleuron not emarginate.....*LIMONIUS*
5. Basal rim of each propleuron emarginate near the hind angles .....*HARMINIUS*
5'. Basal rim of each propleuron not emarginate .....(6)
6. First tarsal joint longer than the following two or three joints combined, the second and third joints more or less lamellate.....*ATHOUS*
6'. Tarsal joints usually simple, the first joint not longer than the following two joints combined .....*TAIWANATHOUS*

Genus LIMONIUS ESCHSCHOLTZ

in THON, Ent. Arch., II, 1, p. 33, (1829).—CANDÈZE, Mon., III, p. 377, (1860); Cat. Elat., p. 146, (1891).—REITTER, Best.-Tab., 56, pp. 12 & 16, (1905).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. pp. 192 & 193, (1906).—C. SCHAUFUSS, in CALWER, Käferb., ed. 6, 1907–16, pp. 657 & 658, (1911).—KUHNT, Illustr. Best.-Tab. Käf. Deutschl., pp. 620 & 634. (1913).—JAKOBSON, Žuki Rossiji, 1905–16, pp. 755 & 756, 1913).—MIWA, Ins. Mats., II, No. 3, p. 133, (1928).

Genotype—*Elater minutus* LINNAEUS, Syst. Nat., ed. 10, p. 406, (1758); (*Hab.*—Europe) (present designation).

Range—Palaearctic, Nearctic and Australian regions.

Genus LIMONISCUS REITTER

Best.-Tab., 56, pp. 12 & 14, (1905).—SCHWARZ, in WYTSMAN, Gen. Ins. 46, Elat. pp. 192 & 195, (1906).—C. SCHAUFUSS, in CALWER, Käferb., ed. 6, 1907–16, p. 657, 1911).—KUHNT, Illustr. Best.-Tab. Käf. Deutschl., pp. 620 & 635, (1913).—JAKOBSON, Žuki Rossiji, 1905–16, pp. 755 & 756, (1913).—MIWA, Ins. Mats., II, No. 2, p. 133, (1928).

Genotype—*Elater violaceus* MÜLLER, Germ. Mag. Ent., IV, p. 184, (1843); (*Hab.*—Germany).

Range—Palaearctic.

Genus PHELETES KIESENWETTER

Naturgesch. Ins. Deutschl. Col., IV, 1857–63, p. 228, (1858).—REITTER, Wien. Ent. Zeit., XIV, p. 256, (1895); Best.-Tab., 56, pp. 12 & 18, (1905).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. pp. 192 & 195, (1906).—C. SCHAUFUSS, in CALWER, Käferb., ed. 6, 1907–16, p. 657, (1911).—KUHNT, Illustr. Best.-Tab. Käf. Deutschl., pp. 620 & 625, (1913).—JAKOBSON, Žuki Rossiji, 1905–16, pp. 755 & 756, (1913).

Genotype—*Elater bructeri* FABRICIUS, Syst. Eleuth., II, p. 243, (1801); (*Hab.*—Europe).

Range—Palaearctic and Nearctic.

Genus HARMINIUS FAIRMAIRE

Ann. Soc. Ent. Fr., (2) X, p. 81, (1852).—LACORDAIRE, Gen. Col., IV, pp. 102 & 120, (1857).—REITTER, Best.-Tab., 56, pp. 12 & 25, (1905).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. pp. 192 & 198, (1906),—C. SCHAUFUSS, in CALWER, Käferb., ed. 6, 1907–16, p. 657, (1911).—KUHNT, Illustr. Best.-Tab. Käf. Deutschl., pp. 620 & 635, (1913).—JAKOBSON, Žuki Rossiji, 1905–16, pp. 756 & 757, (1913).—MIWA, Ins. Mats., II, No. 3, p. 133, (1928).

Key to the Subgenera

1. Prothorax without carina on the pronotal disk or on the hind angles; prosternum without projection at the base near the fore coxal cavities; fourth tarsal joint slightly shorter than the third.....*DIACANTHOUS*
1'. Prothorax with a carina on each pronotal posterior angles and transverse carina on the posterior part of pronotal disk; prosternum with an acute projection at the base near the fore coxal cavities; fourth tarsal joint very short... ....*HARMINIUS*

Subgenus HARMINIUS s. str.

Subgenotype—*Harminius castaneus* FAIRMAIRE, Ann. Soc. Ent. Fr., (2) X, p. 81, t. 3, f. 5, (1852); (*Hab.*—Malta).

Range—Palaearctic.

Subgenus DIACANTHOUS REITTER

Best.-Tab., 56, p. 25, (1905).—SCHWARZ in WYTSMAN, Gen. Ins., 46, Elat. p. 198, (1906).

Subgenotype—*Elater undulatus* DE GEER, Ins., IV, 1752–1778, p. 155, t. 5, f. 26, (1774); (*Hab.*—Europe).

Range—Palaearctic.

Genus ATHOUS ESCHSCHOLTZ

in THON, Ent. Arch., II, 1, p. 33, (1829).—CANDÈZE, Mon., III, p. 416, (1860).—REICHE, Ann. Soc. Ent. Fr., IX, (4), p. 379, (1869).—REITTER, Ent. Nachr., XVI,

p. 241, (1890); Best.-Tab., 56, pp. 13 & 33, (1905).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. p. 199, (1906).—SCHAUFUSS, in CALWER, Käferb., ed. 6, 1907–16, pp. 657 & 659, (1911).—KUHNT, Illustr. Best.-Tab. Käf. Deutschl., pp. 620 & 635, (1913). —JAKOBSON, Žuki Rossiji, 1905–16, pp. 755 & 757, (1913).—MIWA, Ins. Mats., II, No. 3, p. 133, (1928); Trans. Nat. Hist. Soc. Formosa, XX, No. 107, p. 66, (1930).

Key to the Subgenera

1. Antennae serrate from the third joint ..... (2)
1′. Antennae serrate from the fourth joint ..... (5)
2. Prothorax carinate on the pronotal posterior angles ..... (3)
2′. Prothorax without carina ..... *ALCIMATHOUS*
3. Antennal joints with a longitudinal smooth line in the middle respectively; basal plates not narrowed outwards ..... *STENAGOSTUS*
3′. Antennal joints without smooth line; basal plates more or less narrowed outwards ..... (4)
4. Frontal carina strongly depressed, not curved but prolonged forwards at the middle; nasal area with plane surface; pronotal posterior angles more or less excavate with its apex turned upwards ..... *CREPIDOPHORUS*
4′. Frontal carina rounded; nasal area very narrow; pronotal posterior angles not excavate, acute and diverged ..... *ATHOUS* s. str.
5. Antennae acutely serrate; each articulation from the fourth usually jointed to the next at the upper corner, with long pubescence; pronotal posterior angles carinate ..... *HETERATHOUS*
5′. Antennae feebly serrate; articulation jointed to the next at the centre of upper margin, finely tomentous; terminal joint with long bristles ..... *GRYPATHOUS*

Subgenus STENAGOSTUS, C. G. THOMSON

Skand. Col., I, p. 104, (1859).—REITTER, Best.-Tab., 56, pp. 31 & 34, (1905).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. pp. 200 & 201, (1906).—C. SCHAUFUSS, in CALWER, Käferb., ed. 6, 1906–1916, p. 660, (1911).—KUHNT, Illustr. Best.-Tab. Käf. Deutschl., p. 636, (1913).

Subgenotype—*Elater rufus* DE GEER, Mém. Ins., IV, p. 144, t. 5, f. 18, (1774); (*Hab.*—Europe).

Range—Palaearctic.

Subgenus ATHOUS s. str.

Subgenotype—*Elater hirtus* HERBST, in FUESSLY, Arch. Insectengesch., V, p. 144, (1784); (*Hab.*—Europe).

Range—Palaearctic, North America and Indian region.

Subgenus CREPIDOPHORUS MULSANT et GUILLEBEAU

Opusc. Ent., II, p. 189, (1853).—KIESENWETTER, Naturgesch. Ins. Deutschl., IV, 1857–63, p. 313, (1858).—REITTER, Best.-Tab., 56, pp. 32 & 40, (1905).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. pp. 200 & 202, (1906).—C. SCHAUFUSS, in CALWER, Käferb. ed. 6, 1907–16, p. 660, (1911).—KUHNT, Illustr. Best.-Tab. Käf. Deutschl., p. 636, (1913).

Subgenotype—*Crepidophorus anthracinus* MULSANT et GUILLEBEAU, Opusc. Ent., II, p. 191, (1853); (*Hab.*—Europe).

Range—Palaearctic region.

Subgenus ALCIMATHOUS REITTER

Best.-Tab., 56, pp. 32 & 42, (1905).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. pp. 109 & 202, (1906).—C. SCHAUFUSS, in CALWEE, Käferb. ed. 6, 1907–16, p. 660, (1911).

Subgenotype—*Athous sacheri* KIESENWETTER, Naturgesch. Ins. Deutschl., IV, 1857–63, p. 320, Nota, (1858); (*Hab.*—Banat).

Range—Bulgaria, Banat, Walachei, Formosa and North America.

Subgenus HETERATHOUS REITTER

Best.-Tab., 56, p. 32, (1905).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. pp. 200 & 202, (1906).—C. SCHAUFUSS, in CALWER, Käferb., ed. 6, 1907–16, p. 660, (1911),

Subgenotype—*Athous sanguinicollis* FRIVALDSKY, Term. Füzetek, XV, p. 124, (1892); (*Hab.*—Japan).

Range—Japan, Formosa and India.

Subgenus GRYPATHOUS REITTER

Best.-Tab., 56, p. 92, (1905).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. pp. 201 & 206, (1906).—C. SCHAUFUSS in CALWER, Käferb., ed. 6, 1907–16, p. 661, (1911). —MÜLLER, Wien. Ent. Zeit., XXXI, p. 42, (1912).—KUHNT, Illustr. Best.-Tab. Käf. Deutschl., p. 636, (1913).

Subgenotype—*Elater longicollis* OLIVIER, Ent. II, nr. 31, p. 38, t. 8, f. 81, (1790); (*Hab.*—Europe).

Range—Palaearctic region.

Genus PARATHOUS FLEUTIAUX

Ann. Soc. Ent. Fr., LXXXVI, p. 242, (1918); Encycl. Ent. Col., p. 10, (1929)—MIWA, Trans. Nat. Hist. Soc. Formosa, XX, No. 107, p. 66, (1930).

Genotype—*Parathous sanguineus* FLEUTIAUX, Ann. Soc. Ent. Fr., p. 242, (1918); (*Hab.*—Tonkin).

Range—Indo-China and Formosa.

Genus TAIWANATHOUS MIWA

Trans. Nat. Hist. Soc. Formosa, XX, No. 107, p. 68, (1930).

Genotype—*Taiwanathous arisanus* MIWA, ibid.; (*Hab.*—Formosa).

Range—Formosa.

Subfamily CORYMBITINAE SCHENKLING

in W. JUNK, Col. Cat., 88, Elat. 2, p. 357, (1927).

Corymbitites+*Ludiites* CANDÈZE, Mon., IV, pp. 1 & 3, (1863); Cat. Elat., pp. 5 & 164; 6 & 187, (1891).

Ludiidae FLEUTIAUX, Ann. Soc. Ent. Fr., LX, p. 391, (1891).

Corymbitini+*Ludiini* CHAMPION, Biol. Centr.-Amer. Col., III, pp. 476 & 496, (1895).—HEYNE & TASCHENBERG, Exot. Käf., pp. 162 & 164, (1908).

Ludiini REITTER, Best.-Tab., 56, pp. 5 & 6, (1905).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. pp. 5 & 219, (1906).

Corymbitina C. SCHAUFUSS, in CALWER, Käferb., ed. 6, 1907–16, pp. 734 & 737, (1911).—JAKOBSON, Žuki Rossiji, 1905–16, p. 737, (1913).

Ludiina HYSLOP, Ann. Ent. Soc. Amer., X, p. 253, (1917).—LENG, Cat. Col. Amer., p. 169, (1920).

Key to the Genera

1. Prothorax with a long carina on the pronotal posterior angles, which is prolonged forwards along the lateral margin to the anterior rim .....*PRISTILOPHUS*
1′. Prothorax without such carina .....(2)
2. Prosternal sutures single, closed entirely.....*CORYMBITES*
2′. Prosternal sutures double, more or less canaliculate.....(3)
3. Basal rim of the propleuron emarginate near the hind angles .....(4)
3′. Basal rim of the propleuron not emarginate near the hind angles; upper surface of the body with cloudy pubescence.....*PROSTERNON*
4. Upper surface of the body naked and shiny; antennae serrated in both sexes..... *HYPOGANUS*
4′. Body pubescent; antennae pectinate in the male.....*ORITHALES*

Genus CORYMBITES LATREILLE

Ann. Soc. Ent. Fr., III, p. 150, (1834).—CANDÈZE, Mon., IV, p. 73, (1863).—C. G. THOMSON, Skand. Col., VI, p. 66, (1864); X, 92, (1868).—C. SCHAUFUSS, in CALWER, Käferb., ed. 6, 1907–16, p. 623, (1911).—KUHNT, Illustr. Best.-Tab. Käf. Deutschl., p. 621, (1913).—JAKOBSON, Žuki Rossiji, p. 737, (1913).—MIWA, Ins. Mats., II, No. 3, p. 133, (1928); Trans. Nat. Hist. Soc. Formosa, XX, No. 107, p. 72, (1930).

Ludius SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. p. 220, (1906).

Key to the Subgenera

1. Antennae of the male pectinate from the third joint, and of the female acutely serrate.....*ANOSTIRUS*
1′. Antennae of the male not pectinate but more or less serrate.....(2)
2. Antennae scarcely serrate; prothorax short and convex; elytra dilated posteriorly .....*PARANOMUS*
2′. Antennae distinctly serrate.....(3)
3. The third joint of antennae resembling the fourth in shape and sometimes in size .....*ACTENICERUS*
3′. The third joint of antennae usually longer or shorter than the fourth but differs much in shape.....(4)
4. The third joint of antennae shorter than the fourth.....*NEOPRISTILOPHUS*
4′. The third joint of antennae longer than the fourth.....(5)
5. The third joint of antennae narrower than the fourth; pronotal posterior angles carinate.....*SELATOSOMUS*
5′. The third joint of antennae as broad as the fourth; pronotal posterior angles not carinate, with one exception (*C. chlamydatus Lew.*).....*METACTENICERUS*

Subgenus ANOSTIRUS C. G. THOMSON

Skand. Col., I, p. 103.—C. SCHAUFUSS, in CALWER, Käferb., ed. 6, 1907–16, p. 629, (1911).—REITTER, Fauna Germ., III, p. 215, (1911).—KUHNT, Illustr. Best.-Tab. Käf. Deutschl., p. 621, (1913).—JAKOBSON, Žuki Rossiji, p. 737, (1913).

Prothorax spherical convex, not canaliculate in the middle of pronotum, finely but thickly punctulate, with cloudy pubescence. Antennae pectinate from the third joint in the male but serrate in the female.

Subgenotype—*Elater castaneous* LINNAEUS, Syst. Nat., ed. 10, I, p. 405, (1758); (*Hab.*—Europe).

Range—Palaearctic region.

Subgenus ACTENICERUS KIESENWETTER

Naturgesch. Ins. Deutschl. Col., IV, p. 285, (1858).—JACQUELIN DU VAL, Gen. Col. d'Eur., III, p. 128, (1859–63).—C. G. THOMSON, Skand. Col., VI. p. 68, (1864); X, p. 95, (1868).—SCHAUFUSS, in CALWER, Käferb., ed. 6, 1907–16, p. 629, (1911).

—REITTER, Fauna Germ., III, p. 215, (1911).—KUHNT, Illustr. Best.-Tab. Käf. Deutschl., p. 621, (1913).—JAKOBSON, Žuki Rossiji, 1905-16, p. 738, (1913).

Corymbites section III, CANDÈZE, Mon., IV, p. 84, (1863).

Ludius section III, SCHWARZ, in WYTSMAN, Gen. Ins. *Col.*, 46, Elat. p. 221, (1906).

Prothorax much longer than it is wide, more or less longitudinally canaliculate in the middle, coarsely and thickly punctured, with an acute carina on each pronotal posterior angle.

Antennae serrate from the third joint and have not any difference between both sexes; the third joint closely allied to the fourth in shape and size.

Subgenotype—Elater sjaelandicus MÜLLER,* Fauna Fridrichsdal., p. 21, (1764); (*Hab.*—Europe).

Range—Palaearctic region, North America, India, Indo-China and Formosa.

Subgenus NEOPRISTILOPHUS BUYSSON

Faune gallo-rhen., V, 1892-1906, pp. 77 & 87, (1894).—C. SCHAUFUSS, in CALWER's Käferb., ed. 6, 1907-16, p. 632, (1911).—REITTER, Fauna Germ., III, p. 276, (1911).—JAKOBSON, Žuki Rossiji, 1905-16, p. 738, (1913).

Pristilophus (nec GERMAR) LACORDAIRE, Gen. Col., IV, p. 210, (1817).—KIESENWETTER, Naturgesch. Ins. Deutschl. Col., IV, p. 300, (1858).

Corymbites section V, CANDÈZE, Mon., IV, p. 86, (1863).

Ludius section IV, SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. p. 221, (1906).

Antennae from the third joint serrate, the third usually much shorter and narrower than the fourth. Pronotum carinate on the hind angles.

Subgenotype—Elater depressus GERMAR, Fauna Ins. Eur., VII, nr. 9, (1822); (*Hab.*—Hungaria).

Range—Palaearctic region.

Subgenus SELATOSOMUS STEPHENS

Illustr. Brit. Ent. Mandib., III, p. 268, (1830).—C. G. THOMSON, Skand. Col., VI, p. 71, (1864); ibid., X, p. 96, (1868).—BUYSSON, Faune gallo-rhen., V, 1892-1906,

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* *E. sjaelandicus* MÜLLER (1764), is synonymous with *E. tessellatus* FABRICIUS (1775), but the name of *tessellatus* was preoccupied by LINNAEUS (1758), which species is now transfered to the genus *Prosternon*.

KIESENWETTER (1858) adopted *Corymbites tessellatus* GERMAR as the genotype of *Actenicerus*, but GERMAR credit this species to LINNAEUS. CANDÈZE (1863) also reduces *C. tessellatus* GERMAR to synonymy under *C. tessellatus* LINNAEUS, but not indicated FABRICIAN *tessellatus*. The author has come to the conclusion that the genotype of *Actenicerus* must be represented by *Corymbites sjaelandicus* MÜLLER.

pp. 78 & 88, (1894).—REITTER, Wien. Ent. Zeit., XXIX, pp. 165 & 171, (1910); Fauna Germ., III, p. 276, (1911).—C. SCHAUFUSS, in CALWER's Käferb., ed. 6, 1907-16, p. 632, (1911).—JAKOBSON, Žuki Rossiji, 1905-16, p. 738, (1913).

Diacanthus LATREILLE (pars), Ann. Soc. Ent. Fr., III, p. 152, (1834).—LACORDAIRE, Gen. Col., IV, p. 211, (1857).—KIESENWETTER, Naturgesch. Ins. Deutschl. Col., IV, p. 292, (1858).

Hadromorphus MOTSCHULSKY, Bull. Soc. Nat. Moscou, XXXII, IV, p. 375, (1859).

Corymbites section VI, CANDÈZE, Mon., IV, p. 88, (1863).

Ludius section V, SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. p. 221, (1906).

Antennae serrate from the fourth joint, the third nearly obconical, longer and narrower than the fourth; elytra dilated posteriorly, with metallic lustre.

Subgenotype—Elater cruciatus LINNAEUS, Syst. Nat., ed. 10, I, p. 404, (1758); (*Hab.*—Europe).

Range—Palaearctic region and North America.

Subgenus PARANOMUS KIESENWETTER

Naturgesch. Ins. Deutschl., Col. IV, p. 285 (1858).—C. G. THOMSON, Skand. Col., VI, p. 75, (1864).

Corymbites section VII, CANDÈZE, Mon., IV, p. 90, (1863).

Corymbites section VI, SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. p. 220, (1906).

Antennae scarcely serrate, the third joint shorter than the fourth in general; prothorax short and convex; elytra generally dilated in the posterior part, rather feebly punctate-striate; tarsus relatively longer and slender.

Subgenotype—Diacanthus guttatus GERMAR, Fauna Ins. Eur., XXI, nr. 5, (1817); (*Hab.*—Alps).

Range—Palaearctic region and North America.

Subgenus METACTENICERUS nom. nov.

Ludius section VII, SCHWARZ, in WYTSMAN, Gen., Ins., 46, Elat. p. 221, (1906).

Body elongate, rather parallel sided. Antennae serrate from the third joint which is similar to the fourth in shape and size. Prothorax elongate, with a median longitudinal canaliculation, usually not carinate on the pronotal posterior angles with one exception. This subgenus is represented by seven species from Japan and two from Formosa.

Subgenotype—Corymbites gratus, LEWIS, Ann. Mag. Nat. Hist., (6) XIII, p. 262, (1894); (*Hab.*—Japan).

Range—Japan and Formosa.

Genus ORITHALES KIESENWETTER

Naturgesch. Ins. Deutschl. Col., IV, 1857–63, p. 287, (1853).—C. G. THOMSON, Skand. Col., VI, p. 70, (1864); X, p. 96, (1868).—REITTER, Best.-Tab., 56, p. 7, (1905).—C. SCHAUFUSS, in CALWER, Käferb., ed. 6, 1907–16, p. 628, (1911).—KUHNT, Illustr. Best.-Tab. Käf. Deutschl., pp. 618 & 624, (1913).

Genotype—*Elater serraticornis* PAYKULL, Fauna Suec., III, p. 21, (1800); (*Hab.*—Europe).

Range—Palaearctic region.

Genus HYPOGANUS KIESENWETTER

Naturgesch. Ins. Deutschl. Col., IV, 1857–63, p. 299, 1858.—C. G. THOMSON Skand. Col., VII, p. 75, (1864); ibid., X, p. 96, (1868).—REITTER, Best.-Tab., 56, p. 7, (1905).—KUHNT, Illustr. Best.-Tab. Käf. Deutschl., pp. 618 & 624, (1913).—MIWA, Ins. Mats., II, No. 3, p. 133, (1928).

Genotype—*Elater cinctus* PAYKULL, Fauna Suec., III, p. 10, 1800; (*Hab.*—Europe).

Range—Palaearctic region.

Genus PROSTERNON LATREILLE

Ann. Soc. Ent. Fr., III, p. 151, (1834).—C. G. THOMSON, Skand. Col., VI, p. 74, (1864); Ibid., X, p. 96, (1868).—BUYSSON, Faune gallo-rhén., V, 1892–1906, pp. 77 & 84, (1894).—REITTER, Best.-Tab., 56. p. 7, (1905).—C. SCHAUFUSS, in CALWER, Käferb., ed. 6, 1907–16, pp. 628 & 634, (1911).—KUHNT, Illustr. Best.-Tab. Käf. Deutschl., pp. 618 & 624, (1913).—MIWA, Ins. Mats., II, No. 3, p. 133, (1928).

Genotype—*Elater tessellatus* LINNAEUS, Syst. Nat., ed. 10, I, p. 406, (1758); (*Hab.*—Europe).

Range—Palaearctic and Nearctic regions.

Genus PRISTILOPHUS GERMAR

Zeitschr. Ent., IV, p. 82, (1843).

Corymbites section IV, CANDÈZE, Mon., IV, p. 85, (1863); Bull. Soc. Ent. Belg., p. 155, (1890).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, p. 219, (1906); p. 228, (1907).

Genotype—*Pristilophus sericans* GERMAR, Ent., IV, p. 87, (1843) (present designation); (*Hab.*—Cap).

Range—Africa, India, Malay archipelago, Indo-China and Loo-Choo.

Subfamily SENODONINAE SCHENKLING

W. JUNK's Cat. Col., 88, Elat. p. 417, (1927).

Alliotriites CANDÈZE, Mon., IV, p. 225, (1863); Cat. Elat., pp. 6 & 183, (1891).

Allotriini CHAMPION, Biol. Centr.-Amer. Col., III, p. 489, (1895).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. p. 5, (1905); p. 242, (1907).—HEYNE & TASCHENBERG, Exot. Käf., p. 163, (1908).—HYSLOP, Ann. Ent. Soc. America, X, p. 260, (1917).

Allotriina JAKOBSON, Žuki Rossiji, 1905–16, pp. 734 & 741, (1913).

Key to the Genera

1. Prosternal process extends horizontally about three fourths and then abruptly inclinate; prosternal sutures distinctly canaliculate.....*CSIKIA*
1′. Prosternal process incurved and the sutures not canaliculate.....*PENIA*

Genus PENIA HOPE

in GRAY's Zool. Miscell., (Synop. Ins. Nepaul), pp. 21–23, (1831).—LAPORTE DE CASTELNAU, in SILBERMAN, Rév. Ent., IV, p. 11, (1836).—LACORDAIRE, Gen, Col., IV, pp. 197 & 200, (1857).—CANDÈZE, Mon., IV, pp. 225 & 228, (1863); Cat. Elat., p. 184, (1891).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. pp. 243 & 245, (1907).—JAKOBSON, Žuki Rossiji, 1905–16, p. 741, (1913).—MIWA, Ins. Mats., III, No. 1, p. 36, (1928); Trans. Nat. Hist. Soc. Formosa, XXI, No. 113, p. 73, (1931).

Genotype—*Penia eschscholtzi* (HOPE) CASTELNAU, in SILBERMAN, Rév. Ent., IV, p. 11, (1836); (*Hab.*—Nepal).

Range—Oriental region.

Genus CSIKIA SZOMBÀTHY

Ann. Mus. Nat. Hung., VIII, p. 359, (1910).—MIWA, Ins. Mats., III, No. 1, p. 36, (1928); Trans. Nat. Hist. Soc. Formosa, XXI, No. 113, p. 73, (1931).

Genotype—*Csikia dimatoides* SZOMBÀTHY, Ann. Mus. Nat. Hung., VIII, p. 359, (1910); (*Hab.*—Formosa).

Range—Formosa.

Subfamily DIMINAE SCHENKLING

W. JUNK's Col. Cat., 88, Elat. II, p. 419, (1927).

Dimites CANDÈZE, Mon., VI, pp. 1 & 237, (1863); Cat. Elat., pp. 6 & 184, (1891).

Dimini CHAMPION, Biol. Centr.-Amer. Col., III, p. 476, (1895).—HEYNE & TASCHENBERG, Exot. Käf., p. 164, (1908).

Dimitini SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. p. 5, (1906); p. 246, (1907).—HYSLOP, Ann. Ent. Soc. Amer., X, p. 260, (1917).

Beliophorina JAKOBSON, Žuki Rossiji, 1905–16, pp. 734 & 737, (1913).

Genus YEZODIMA MIWA

Ins. Mats., III, No. 1, p. 40, (1928); Zool. Monthl. Mag., Tôkyô, XLI, No. 492, p. 450, (1929).

Genotype—*Yezodima convexum* MIWA, Ins. Mats., III, No. 1, p. 39, Pl. I, f. 2, (1928); (*Hab.*—Northern Japan).

Range—Japan, Kuriles and Saghalien.

Subfamily LUDIINAE FLEUTIAUX

Voy. ALLUAUD & JEANNEL, Afr. or. Col., XIII, p. 99, (1919).

Ludiites CANDÈZE, Mon., IV, pp. 2 & 281, (1863); Cat. Elat., pp. 6 & 187, (1891).—MIWA, Ins. Mats., III, No. I, p. 36, (1928); Trans. Nat. Hist. Soc. Formosa, XXI, No. 113, p. 74, (1931).

Ludiides LACORDAIRE (pars), Gen. Col., IV, p. 167, (1857).

Ludiidae FLEUTIAUX, Ann. Soc. Ent. Fr., LX, p. 391, (1891).

Ludiini CHAMPION (pars), Biol. Centr.-Amer. Col., III, p, 496, (1895).—REITTER, Best.-Tab., 56, pp. 5 & 6, (1905).—HEYNE & TASCHENBERG, Exot. Käf., p. 164, (1908).

Ludiina JAKOBSON, Žuki Rossiji, 1905-16, pp. 734 & 741, (1913).

Steatoderini SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. p. 5, (1906); p. 252, (1907).

Steatoderini+Agriotina HYSLOP (pars), Ann. Ent. Soc. Amea., X, pp. 253 & 258, (1917).

Key to the Genera

1. Basal plates more or less sharply dentate.....(2)
1′. Basal plates not dentate.....(6)
2. Mesosternal groove inclined interiorly.....(3)
2′. Mesosternal groove horizontal.....(5)
3. Basal plates narrowed outwards.....(4)
3′. Basal plates with same width.....*APHANOBIUS*
4. Prosternal process extends horizontally about half way and then abruptly inclinate.....*LUDIUS*
4′. Prosternal process curved inwards behind the coxae, then horizontal, being emarginate at the apex.....*NEOTRICHOPHORUS*
5. Lateral borders of the mesosternal groove diverged anteriorly.....*LUDIGENUS*
5′. Lateral borders of the mesosternal groove parallel.....*PARALLELOSTETHUS*
6. Prosternal sutures furrowed anteriorly.....(7)
6′. Prosternal sutures closed entirely.....*AGONISCHIUS*
7. Lateral margin of the prothorax curved downwards in anterior part and reaching to the lower margin of the eyes.....(8)
7′. Lateral margin rather straight and not reaches the lower margin of the eyes...(10)

8. Basal plates suddenly and strongly narrowedo utwards.....*SCELISUS*
8′. Basal plates gradually and gently narrowed outwards.....(9)
9. Prosternal sutures incurved.....*AGRIOTES*
9′. Prosternal sutures straigh.....*AGRIOTIDES*
10. Basal plates nearly in the same width; antennae very short and feebly serrate.....*SERICUS*
10′. Basal plates strongly narrowed outwards; antennae in the male longer than the pronthorax.....*DOLOPIUS*

Genus LUDIUS BERTHOLD

Natürl. Fam. Tierreichs, p. 336, (1827).—KIESENWETTER, Naturgesch. Ins. Deutschl. Col., IV, 1857-63, pp. 228 & 274, (1858).—CANDÈZE, Mon., IV, p. 294, (1863).—C. G. THOMSON, Skand. Col., VI, p. 105, (1864).—REITTER, Fauna Germ., III, pp. 210 & 220, (1911).—C. SCHAUFUSS, in CALWER, Kärerb., ed. 6, 1907-16, pp. 628 & 640, (1911).—KUHNT, Illustr. Best.-Tab. Käf. Deutschl., pp. 618 & 626, (1913).—FLEUTIAUX, Voy. ALLUAUD & JEANNEL, Afr. or. Col., XIII, p. 99, (1919); Ann. Soc. Ent. Fr., LXXVII, p. 253, (1918); Opusc. Inst. Indochine, II, p. 141, (1924).—MIWA, Ins. Mats., III, No. 1, p. 367, (1928); Trans. Nat. Hist. Soc. Formosa, XXI, No. 113, p. 74, (1931).

Steatoderus ESCHSCHOLTZ, in SILBERMAN, Rév. Ent., IV, tab. (1836).—REITTER, Best.-Tab., 56, p. 8, (1905).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat., pp. 252 & 256, (1907).

Genotype—*Elater ferrugineus* LINNAEUS, Syst. Nat., ed. 10, I, p. 405, (1758); (*Hab.*—Europe).

Range—Cosmopolitan.

Genus NEOTRICHOPHORUS JAKOBSON

Žuki Rossiji, 1905-16, pp. 741 & 742, (1913) (nom. nov.).—MIWA, Ins. Mats., III, No. 1, p. 37, (1928); Trans. Nat. Hist. Soc. Formosa, XXI, No. 113, p. 74, (1913).

Crigmus (nec. J. LECONTE, 1852) LEWIS, Ann. Mag. Nat. Hist., (6) XIII, p. 266, (1894).

Trichophorus (nec TEMMINCK 1838) MULSANT & GODART, Opusc. Ent., II, p. 181, (1853).—KRAATZ, Deutsche Ent. Zeitschr., p. 125, (1891).—REITTER, Best.-Tab., 56, p. 8, (1905).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, pp. 252 & 258, (1907).—C. SCHAUFUSS, in CALWER, Käferb., ed. 6, 1907-16, p. 628, (1911).

Genotype—*Trichophorus guillebeaui* MULSANT & GODART, Opusc. Ent., II, p. 181, (1853); (*Hab.*—France).

Range—Cosmopolitan (except Africa).

Genus **APHANOBIUS** ESCHSCHOLTZ

in THON, Ent. Arch., II, 1, p. 33, (1829).—CANDÈZE, Mon., IV, pp. 283 & 317, (1863).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. pp. 252 & 261, (1907).—JAKOBSON, Žuki Rossiji, 1905-16, pp. 741 & 742, (1913).—FLEUTIAUX, Voy. ALLUAUD & JEANNEL, Afr. or. Col., XIII, p. 99, (1911).—MIWA, Ins. Mats., III, No. 1, p. 37, (1928); Trans. Nat. Hist. Soc. Formosa, XXI, No. 113, p. 74, (1931).

Genotype—Aphanobius longicollis ESCHSCHOLTZ, in THON, Ent. Arch., II, 1, p. 33, (1829); (*Hab.*—Manila).

Range—India, Indo-China, Malay archipelago, China, Formosa, Maurice, Calabar and Zanzibar.

Genus **PARALLELOSTETHUS** SCHWARZ

in WYTSMAN, Gen. Ins., 46, Elat. pp. 252 & 258, (1907).—JAKOBSON, Žuki Rossiji, 1905-16, pp. 741 & 742, (1913).—FLEUTIAUX, Ann. Soc. Ent. Fr., LXXVII, p. 254, (1918); Opusc. Inst. Indochine, II, p. 143, (1924).—MIWA, Ins. Mats., III, No. 1, p. 37, (1928); Trans. Nat. Hist. Soc. Formosa, XXI, No. 113, p. 74, (1931).

Genotype—Elater attenuatus SAY, Ann. Lyc. N. Y., I, Pl. 2, p. 257, (1825); (*Hab.*—North America).

Range—Oriental region and North America.

Genus **LUDIGENUS** CANDÈZE

Mon., IV, pp. 283 & 325, (1863); Cat. Elat., p. 192, (1891).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. pp. 252 & 262, (1907).—MIWA, Ins. Mats., III, No. 1, p. 37, (1928); Trans. Nat. Hist. Soc. Formosa, XXI, No. 113, pp. 74 & 76, (1931).

Genotype—Ludigenus politus CANDÈZE, Mon., IV., p. 326, (1863); (*Hab.*—Borneo).

Range—Oriental region.

Genus **SCELISUS** CANDÈZE

Mon., IV, pp. 283 & 327, (1863); Cat. Elat., p. 192, (1891).—SCHWARZ, in WYTSMAN, Gen. Ins. 46, Elat. pp. 253 & 263, (1907).—MIWA, Ins. Mats., III, No. 1, p. 37, (1928); Trans. Nat. Hist. Soc. Formosa, XXI, No. 113, pp. 74 & 76, (1931).

Genotype—Scelisus sanguineus CANDÈZE, Mon., IV, p. 328, t. 5, f. 1, (1863); (*Hab.*—Nepal).

Range—Nepal, Assam, Tonkin and Formosa.

Genus **AGRIOTES** ESCHSCHOLTZ

in THON, Ent. Arch., II, 1, p. 34, (1829).—LACORDAIRE, Gen. Col., IV, pp. 198 &

215, (1857).—CANDÈZE, Mon., IV, pp. 284 & 358, (1863); Cat. Elat., p. 196, (1891).—J. LECONTE, Trans. Amer. Ent. Soc., XII, p. 15, (1886).—SCHWARZ, Deutsche Ent. Zeitschr., p. 81, (1891); in WYTSMAN, Gen. Ins., 46, Elat., pp. 253 & 268, (1907).—REITTER, Best.-Tab., 56, p. 8, (1905).—C. SCHAUFUSS, in CALWER, Käferb., ed. 6, 1907-16, pp. 628 & 636, (1911).—KUHNT, Illustr. Best.-Tab. Käf. Deutschl., pp. 618 & 625, (1913).—JAKOBSON, Žuki Rossiji, 1905-16, pp. 741 & 742, (1913).—MIWA, Ins. Mats., III, No. 1, p. 37, (1928); Trans. Nat. Hist. Soc. Formosa, XXI, No. 113, pp. 74 & 77, (1931).

Genotype—Elater sputator LINNAEUS, Syst. Nat. ed. 10, I, p. 405, (1758); (*Hab.*—Europe).

Range—Cosmopolitan (except Australia and Oceania).

Genus AGRIOTIDES SCHWARZ

in WYTSMAN, Gen. Ins., 46, Elat. p. 273, (1906).—MIWA, Ins. Mats., III, No. 1, p. 37, (1928); Trans. Nat. Hist. Soc. Formosa, XXI, No. 113, pp, 74 & 77. (1931).

Genotype—Agonischius mutabilis SCHWARZ, Deutsche Ent. Zeitschr., p. 153, (1898); (*Hab.*—Assam).

Range—Oriental region.

Genus AGONISCHIUS CANDÈZE

Mon., IV, pp. 284 & 407, (1863); Cat. Elat., p. 201, (1891).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. pp. 253 & 275, (1907).—JAKOBSON, Žuki Rossiji, 1905-16, pp. 742 & 745, (1913).—MIWA, Ins. Mats., III, No. 1, p. 37, (1928); Trans. Nat. Hist. Soc. Formosa, XXI, No. 113, pp. 74 & 78, (1931).

Genotype—Agonischius pectoralis CANDÈZE, Mon., IV, p. 419, (1863); (*Hab.*—Hymalaya.

Range—Palaearctic, Oriental and Australian regions.

Genus DOLOPIUS ESCHSCHOLTZ

in THON, Ent. Arch., II, 1, p. 34, (*Dalopius*) (1829).—KIESENWETTER, Naturgesch, Ins. Deutschl. Col., IV, 1857-63, p. 228, (1858).—C. G. THOMSON, Skand. Col., VI, p. 90, (1864); X, p. 100, (1868).—REITTER, Best.-Tab., 56, p. 8, (1905).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. pp. 254 & 280, (1907).—C. SCHAUFUSS, in CALWER, Käferb., ed. 6, 1907-16, p. 628, (1911).—KUHNT, Illustr. Best.-Tab. Käf. Deutschl., pp. 618 & 624, (1913).—JAKOBSON, Žuki Rossiji, 1905-16, pp. 741 & 744, (1913).—MIWA, Ins. Mats., III, No. 1, p. 37, (1928).

Genotype—Elater marginatus LINNAEUS, Syst. Nat., ed. 10, I, p. 405, (1758); (*Hab.*—Europe).

Range—Palaearctic and Nearctic regions.

Genus SERICUS ESCHSCHOLTZ

in THON, Ent. Arch., II, 1, p. 34, (1829).—CANDÈZE, Cat. Elat., p. 203, (1891).—REITTER, Best.-Tab., 56, p. 8, (1905).—SCHWARZ, in WYTSMAN, Gen. Ins., 46 Elat. pp. 254 & 281, (1907).—C. SCHAUFUSS, in CALWER, Käferb., ed. 6, 1907–16, pp. 628 & 635, (1911).—KUHNT, Illustr. Best.-Tab. Käf. Deutschl., pp. 618 & 624, (1913).—JAKOBSON, Žuki Rossiji, 1905–16, pp. 741 & 744, (1913).

Atractopterus J. LECONTE, Trans. Amer. Philos. Soc. (n.s.) X, pp. 422, 454 & 505, (1853).

Dolerosomus MOTSCHULSKY, Bull. Soc. Nat. Mosc., XXXII, IV, p. 332, (1859).

Sericosomus STEPHENS, Mant. Brit. Col., p. 175, (1859).—KIESENWETTR, Naturgesch. Ins. Deutschl. Col., IV, 1857–63, pp. 228 & 269, (1858).—CANDÈZE, Mon., IV, pp. 284 & 426, (1863).—C. G. THOMSON, Skand. Col., VI, p. 96, (1864); X, p. 92, (1868).

Genotype—Elater brunneus LINNAEUS, Syst. Nat., ed. 10, I, p. 404, (1758); (*Hab.*—Europe.

Range—Palaearctic and Nearctic regions.

Subfamily SYNAPTINAE FLEUTIAUX

FLEUTIAUX, Voy. ALLUAUD & JEANNEL, Afr. or. Col., XIII, p. 100, (1919).

Adrastites CANDÈZE, Mon., IV, pp. 2 & 448, (1863); Cat. Elat., pp. 7 & 206, (1891).

Adrastini CHAMPION, Biol. Centr.-Amer. Col., III, p. 533, (1895).—HEYNE & TASCHENBERG, Exot. Käf., p. 165, (1908).

Synaptina JAKOBSON, Žuki Rossiji, 1905–16, pp. 734 & 745, (1913).

Adrastina HYSLOP, Ann. Ent. Soc. Amer., X. p. (255) 263, (1917).

Key to the Genera

1. The fourth tarsal joint lamellate and broader than the third.....(2)
1′. Tarsal joints usually simple.....*ADRASTUS*
2. Frons acutely pointed anteriorly.....*GLYPHONYX*
2′. Frons transversely truncate anteriorly.....*SILESIS*

Genus GLYPHONYX CANDÈZE

Mon., IV, pp. 448 & 451, (1863); Elat. nouv., III, p. 103, (1881); Cat. Elat., p. 207, (1891).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. p. 290, (1907).—JAKOBSON, Žuki Rossiji, 1905–16, p. 745, (1913).—MIWA, Ins. Mats., III, No. 1, p. 37, (1928); Trans. Nat. Hist. Soc. Formosa, XXI, No. 113, p. 81, (1931).

Genotype—Glyphonyx gundlachii CANDÈZE, Mon., IV, p. 453, (1863); (*Hab.*—Cuba).

Range—Southern Asia, Africa and America.

Genus SILESIS CANTÈZE

Mon., IV, pp. 448 & 458, (1863); Cat. Elat., p. 208, (1891).—REITER, Best.-Tab., 56, p. 8, (1905).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat., pp. 290 & 293, (1907).—C. SCHAUFUSS, in CALWER, Käferb., ed, 6, 1907–16, p. 628, (1911).—JAKOBSON, Žuki Rossiji, 1905–16, p. 745, (1913).—MIWA, Ins. Mats., III, No. 1, p. 37, (1928); Trans. Nat. Hist. Soc. Formosa, XXI, No. 113, p. 81, (1931).

Cratonychus REICHE (pars), Ann. Soc. Ent. Fr., IV, p. 416, (1856).

Genotype—Silesis hilaris CANDÈZE, Mon. IV, p. 461, (1863); (*Hab.*—Ceylon).

Range—Palaearctic and Oriental regions.

Genus ADRASTUS ESCHSCHOLTZ

in THON, Ent. Arch., II, 1, p. 35, (1829).—CANDÈZE, Mon., IV, pp. 448 & 464, (1863).—REITTER, Best.-Tab., 56, p. 8, (1905).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. pp. 290 & 295, (1907).—KUHNT, Illustr. Best.-Tab. Käf. Deutschl., pp. 618 & 626, (1913).—JAKOBSON, Žuki Rossiji, (1905–16) pp. 745 & 746, (1913).

Genotype—Elater limbatus FABRICIUS, Gen. Ins., p. 235, (1777); (*Hab.*—Europe).

Range—Palaearctic region.

Subfamily DENTICOLLINAE SCHENKLING

W. JUNK's Cat. Col., 88, Elat. II, p. 494, (1927).

Campylides CANDÈZE, Mon., I, p. 16, (1857); IV, p. 471, (1863).

Campylites CANDÈZE, Cat. Method. Elat., pp. 7 & 210, (1891).

Lepturoidites CANDÈZE, Cat. Elat., p. 210, nota 1, (1891).

Campylidae FLEUTIAUX, Ann. Soc. Ent. Fr., LX, p. 395, (1891).

Campylini SEIDLITZ, Fauna Balt., ed. 2, p. 38, (1888).—HEYNE & TASCHENBERG, Exot. Käf., p. 166, (1908).

Denticollini REITTER, Best.-Tab. 56, p. 13, (1905).—C. SCHAUFUSS, in CALWER, Käferb., ed. 6, 1907–16, pp. 626 & 666, (1911).

Lepturoidini SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. p. 3, (1906); p. 296, (1907).

Denticollina JAKOBSON, Žuki Rossiji, 1905–16, pp. 735 & 765, (1913).

Lepturoidina HYSLOP, Ann. Ent. Soc. Amer., X, p. 253, (1917).

Campylinae FLEUTIAUX, Voy. ALLUAUD & JEANNEL, Afr. or. Col., XIII, p. 106, (1919).

Key to the Genera

1. Frontal margin with a carinated ridge.....*DENTICOLLIS*
1′. Frontal margin without carina.....(2)
2. Antennae pectinate in the male; eyes circular.....*PLECTROSTERNUS*
2′. Antennae serrate in both sexes; eyes oval.....*HEMIOPS*

Genus **DENTICOLLIS** PILLER et MITTERPACHER

Iter Poseg., p. 86, (1783).—REITTER, Best.-Tab., 56, p. 13, (1905).—C. SCHAUFUSS, in CALWER, Käferb., ed. 6, 1907–16, p. 636, (1911).—JAKOBSON, Žuki Rossiji, 1905–16, p. 764, (1913).—MIWA, Ins. Mats., III, No. 1, p. 37, (1928); Trans. Nat. Hist. Soc. Formosa, XXI, No. 113, p. 82, (1931).

Campylus FISCHER-WALDHEIM, Entomonogr. Imp. Ross., II, p. 453, (1823–24) (Genotype: *Elater linealis* LINNÉ).—CANDÈZE, Mon., IV, pp. 471 & 479, (1863).—C. G. THOMSON, Skand. Col., VI, p. 63, (1864); X, p. 92, (1833).—REITTER, Wien. Ent. Zeit., XXV, p. 273, (1906).—KUHNT, Illustr. Best.-Tab. Käf. Deutschl., pp. 616 & 638, (1913).

Lepturoides HERBST, in FÜESSLY, Arch. Insektengesch., V, p. 103, (1784) (isogenotypic with *Campylus*).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. pp. 295 & 298, (1907).

Genotype—*Denticollis rubens* PILLER et MITTERPACHER, Iter Poseg., p. 86, t. 8, f. 16, (1783); (*Hab.*—Europe).

Range—Europe, Asia and North America.

Genus **PLECTROSTERNUS** LACORDAIRE

Gen. Col., IV, pp. 224 & 227, (1857).—CANDÈZE, Mon., IV, pp. 472 & 492, (1863); Cat. Elat., p. 214, (1891).—FLEUTIAUX, Bull. Soc. Ent. Fr., p. 108, (1903).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. p. 297, (1907).—MIWA, Ins. Mats., III, No. 1, p. 37, (1928); Trans. Nat. Hist. Soc. Formosa, XXI, No. 113, p. 83, (1931).

Oxysternus (nec. ERICHSON, 1834) LATREILLE (pars), Ann. Soc. Ent. Fr., III, p. 164, (1834).

Genotype—*Plectrosternus rufus* LACORDAIRE, Gen. Col., IV, p. 228, (1857); (*Hab.*—Sylhet).

Range—India, Indo-China and Formosa.

Genus **HEMIOPS** LAPORTE de CASTELNAU

in SILBERMAN, Rév. Ent., IV, p. 15, (1836).—GERMAR, Zeitschr. Ent., IV, p. 51, (1843).—CANDÈZE, Mon., IV, p. 493, (1863); Cat. Elat., p. 214, (1891).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. pp. 297 & 304, (1907).—JAKOBSON, Žuki Rossiji, 1905–16, pp. 764 & 765, (1913).—MIWA, Ins. Mats., III, No. 1, p. 37, (1928); Trans. Nat. Hist. Soc. Formosa, XXI, No. 113, p. 84, (1931).

Oxysternus (nec. ERICHSON) LATREILLE (pars), Ann. Soc. Ent. Fr., III, p. 164, (1834).

Genotype—*Hemiops flava* CASTELNAU, in SILBERMAN, Rév. Ent., IV, p. 15, (1836); (*Hab.*—Bengal).

Range—Widely distributed in Oriental region.

III. Distribution of Genera

The Japanese Empire or the Japanese archipelago is comprised of the chain of islands situated obliquely from the latitudes 21° 45′ and the longitudes 119° 18′ to 55° 55′ North and 153° 30′ East, from the subtropical to the frigid zone, and include a part of the oriental and palaearctic regions from the zoogeographical point of view. In showing the distribution of the genera indigenous to the Japanese Empire, the author has divided the country of Japan into following five regions, viz. Saghalien (Karafuto) and the Kurile islands (Chishima), Japan (including Hokkaidô or Yezo, Honshiu, Shikoku and Kiushiu), Corea (Chôsen), Loo-Choo (Riukiu) and Formosa (Taiwan). In dividing the Empire into these regions, the author has followed chiefly the administrative and the geographical divisions, except that he has added Amami-Ôshima, which is administratively included in the Kiushiu district, to the Loo-Choo region.

As far as the author's investigation goes, the number of genera which are indigenous to the Empire is 72.

The distribution of the world's genera are enumerated in Table I, in which he has divided the distributing regions after K. HORDHAUS (see bibriography).

TABLE I

(a) Genera Indigenous to the Japanese Empire / (b) Distributing Regions in the World	Palaearctic Region								Oriental Region							Australian Region						
	Eurosiberian Subregion					Manchurian Subregion			Indo-Chinese Subregion													
	1 Saghalien and Kurile	2 Siberia	3 Europe	4 Mediterranean Subregion	5 Turkmenian Subregion	6 Manchuria and North China	7 Corea	8 Japan	9 Loo-Choo	10 Formosa	11 South China	12 Indo-China	13 Indian Subregion	14 Ceylonese Subregion	15 Malayan Subregion	16 Melanesian Subregion	17 Austrotasamanian Subregion	18 Polynesian Subregion	19 New Zealand Subregion	20 Madagascan Region	21 Ethiopian Region	22 Nearctic Region	23 Neotropical Region
Agrypnus				×	×				×	×	×	×	×	×	×	×	×			×	×	×	×
Adelocera	×	×	×	×	×			×	×	×	×	×	×	×	×	×	×	×		×	×	×	×
Lacon		×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×

(a) \ (b)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Meristhus						×		×		×	×	×	×	×	×					×	×	×	×
Compsolacon			×			×				×	×	×	×										
Paralacon		×				×	×		×	×	×	×											
Alaus				×	×	×		×	×	×	×	×	×	×	×	×	×	×			×	×	×
Tetrigus						×	×	×	×	×	×	×	×	×	×	×					×		
Campsosternus									×	×	×	×	×	×	×								
Pectocera						×		×	×	×	×	×	×										
Sephilus									×	×					×								
Anathesis										×	×	×			×	×							
Prodrasterius										×	×	×	×	×	×								
Aeoloderma				×	×			×	×	×	×	×	×	×	×	×	×	×			×	×	×
Heterodereς				×	×					×	×	×	×	×	×	×	×				×	×	×
Elater	×	×	×	×	×	×	×	×		×	×	×	×		×		×				×		
Xantherater									×	×													
Megapenthes			×			×	×	×		×	×	×	×		×	×	×				×	×	×
Melanoxanthus			×	×			×	×	×	×	×	×	×	×		×					×	×	×
Pengamethes							×	×	×		×												
Anchastus					×	×		×		×	×	×	×	×	×	×					×	×	×
Arrhaphes										×		×	×	×	×						×	×	×
Hypnoidus			×	×	×			×		×													
Crypnoidus			×	×	×			×														×	×
Scoliocerus			×	×	×			×															
Curtisius			×	×	×	×		×		×												×	
Zorochrus	×		×	×	×			×		×	×	×	×	×	×	×					×	×	×
Quasimus			×	×	×			×	×	×	×	×	×	×									
Cardiohypnus										×		×	×										
Phorocardius										×		×											
Cardiophorus			×	×	×	×		×		×	×	×	×	×	×	×					×	×	×
Paracardiophorus			×	×	×		×	×	×	×	×	×	×	×	×	×							×
Platynychus			×	×	×	×	×	×	×	×	×	×	×	×	×	×					×	×	

(a) \ (b)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Cardiotarsus										×	×	×	×	×	×					×	×		
Psellis										×										×			
Neodiploconus								×		×	×	×	×										
Spheniscosomus				×		×	×	×		×	×	×	×		×	×						×	
Melanotus	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×				×	×	×	
Cremnostethus										×		×											
Metriaulacus										×		×		×									
Limonius	×	×	×	×	×	×		×		×		×				×						×	
Limoniscus		×	×	×			×																
Pheletes	×	×	×	×		×		×		×												×	
Harminius	×	×	×	×		×		×		×	×												
Parathous										×		×											
Athous		×	×	×	×	×		×		×	×	×	×	×								×	×
Taiwanathous										×													
Corymbites	×	×	×	×	×	×	×	×		×	×	×	×				×		×	×	×	×	×
Orithales			×					×															
Hypoganus	×		×					×															
Prosternon	×	×	×		×	×	×															×	
Pristilophus									×			×	×		×						×		
Penia										×		×	×		×								
Csikia										×													
Yezodima	×							×															
Ludius		×	×					×	×		×	×	×	×	×	×					×	×	×
Neotrichophorus			×	×	×	×		×	×	×	×	×	×	×	×		×					×	×
Aphanobius								×		×	×	×	×		×	×					×		
Parallelostethus										×	×	×	×	×	×							×	
Ludigenus										×	×	×	×		×								
Scelisus										×			×										
Agriotes	×	×	×	×	×	×		×	×	×	×	×								×		×	×
Agriotides										×	×	×											

(a) \ (b)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Agonischius						×	×	×	×	×	×	×	×	×	×		×						
Dolopius	×	×	×					×														×	
Sericus		×	×	×	×			×														×	
Glyphonyx								×	×	×	×	×	×	×	×					×	×	×	×
Silesis			×	×			×	×	×	×	×	×	×	×	×								
Adrastus		×	×	×	×	×		×															
Denticollis	×	×	×	×	×	×		×		×	×												×
Plectrosternus										×		×	×										
Hemiops										×	×	×	×		×								
72 genera	14	27	33	32	26	27	16	42	21	58	43	49	45	27	38	19	19	4	5	19	22	29	22

The Elaterid-fauna of the Japanese Empire as tabulated in Table I, when we consider the genera only, is related especially to the following regions, namely, China, Indo-China, India, Malay, Europe, Siberia, etc.

In the same way a percentage of relation of each other region is shown in the following Table II.

TABLE II

(Number in percentage)

Distributing Regions in the World		Five Regions in the Japanese Empire	Saghalien & Kuriles	Japan	Corea	Loo-Choo	Formosa
Palaearctic Region	Eurosiberian Subregion	Saghalien and Kuriles	100	31	25	10	12
		Siberia	86	57	69	33	29
		Europe	93	71	75	43	36
	Mediterranean Subregion		71	69	63	52	41
	Turkmenian Subregion		64	55	44	38	34
	Manchurian Subregion	North China & Manchuria	64	57	75	52	40
		Corea	29	31	100	43	24
		Japan	93	100	81	71	52

Distributing regions in the world		Five regions in the Japanese Empire	Saghalien & Kuriles	Japan	Corea	Loo-Choo	Formosa
Oriental Region	Indo-Chinese Subregion	Loo-Choo	14	36	56	100	34
		Formosa	50	71	88	95	100
		South China	71	71	81	86	69
		Indo-China	50	69	88	90	81
	Indian Subregion		43	64	81	81	74
	Ceylonese Subregion		21	48	56	67	47
	Malayan Subregion		29	55	75	81	64
Australian Region	Melanesian Subregion		21	36	50	38	33
	Austrotasmanian Subregion		36	40	56	38	31
	Polynesian Subregion		7	10	6	14	7
	New Zealand Subregion		14	12	13	14	9
Madagascan Region			43	33	38	29	33
Ethiopian Region			29	40	44	43	36
Nearctic Region			64	57	56	33	40
Neotropical Region			36	45	38	38	36

The affinity of relation between the fauna of any two regions in Japan is induced by taking the average of the percentages of these two regions as follows:

TABLE III

(Number in percentage)

1. Saghalien & Kuriles	(1)			
2. Japan	62	(2)		
3. Corea	27	56	(3)	
4. Loo-Choo	12	54	50	(4)
5. Formosa	31	70	56	65	(5)

When we consider the distribution of the genera according to the above mentioned tables we can perceive that the fauna of Saghalien and the Kuriles having close affinity to Europe, Siberia (including Amur and Kamchatka), Japan and China. Corea is connected to China and Siberia through Manchuria and Northern China of Palaearctic region but it may be thought that some Oriental factors were descended from south eastern Chinese fauna along the coast to the south western Corea, for examples, they are *Paralacon, Tetrigus, Agonischius, Spheniscosomus,* etc.

Japan is including many Palaearctic factors but at the same time, some genera indigenous to Oriental regions are distributed. On the latter occasion, we can not except an influence of the Japanese Gulf-stream, which is, no doubt, enriching our Elaterid-fauna by the factors of tropical zone, besides one may consider that the Oriental factors have been derived from their cradle before the Japanese archipelago, (from a geological stand point), was not separated from the continent by age, for example, the genera belonging to Oriental or other tropical fauna are *Meristhus, Tetrigus, Pectocera, Aeoloderma, Melanoxanthus, Pengamethes, Agoischius, Anchastus, Spheniscosomus,* etc. On the other hand, there are not a few of the pure Palaearctic genera in Japan, viz. *Orithales, Hypoganus, Dolopius, Adrastus, Scoliocerus, Sericus,* etc. As far as the Elaterid-fauna of Loo-Choo is concerned it is actually included in the Indo-China subregion of Oriental regions and has a very close affinity to the fauna of Formosa. There is not to be found any Palaearctic factor in Loo-Choo on the contrary of some typical Oriental genera, namely, *Pristilophus, Neodiploconus, Campsosternus,* etc., are found there. Consulting the Tables you will perceive that the fauna of Formosa is related to the following districts in the following order, viz. Indo-China, India, South China and Malay. Thus it may be thought that the *Elateridae* of Formosa, when we consider the genera only, belongs to the same fauna as that of the southern continent of Asia, namely, Oriental regions and also presumed that the palaearctic genera as *Denticollis, Hypnoidus* and *Curtisius,* which are found in the mountainous zone of Formosa would be descended from western Chinese fauna, of a branch of the Turkmenian subregion.

Finally when we discuss on the fauna of all the regions in the Japanese Empire we can not leave out of the consideration the Bonin, Caroline, Mariana and Marshal islands in addition to the above mentioned regions,

which are included in the Polynesian and Melanesian subregions of Australian fauna, but unfortunately very few materials from these parts are in the institute, so that the author has to reject these fauna from the present discussion.

Only three genera, namely, *Adelocera, Alaus* and *Elater,* were reported from the Bonin islands but these are distributed through Japan, Loo-Choo and Formosa, the former two of which were also reported from Polynesian and Melanesian regions but the *Elater* does not occur there.

SPECIAL ARTICLES

I. Fauna of Japan

The first description of the *Elateridae* of Japan was recorded in 1860, by Dr. E. CANDÈZE, in his work "Monographie des Elaterides, III", in which he has described two new species, such as *Melanotus legatus* and *cete*, collected by M. GUERIN-MÉNEVILLE.

Following that and in the same year, three new species viz. *Lacon binodulus*, *Melanotus laticollis* and *Actenicerus pruinosus* together with *Melanotus piger* known from China were reported by V. de MOTSCHULSKY in his work "Insectes du Japon", and which had been collected by Madame GASCHKEWITCH in the northern districts of Japan, chiefly from Edo (Tôkyô) to Hakodate.

In 1863, E. CANDÈZE has described twelve new species from Japan in his "Elaterides nouveaux, I". Some of the species were collected by P. F. von SIEBOLD and sent to CANDÈZE from Dr. SNELLEN van VOLLENHOVEN of Leyden Museum, but others were presented by Dr. M. MÄKLIN from Helsingfors Museum, which is a collection of GRYPENBERG, of a naval officer of Russia. In 1866, V. de MOTSCHULSKY again reported 10 Elaterid-species in his "Catalogue des Insectes reçus du Japon", which had been sent from Mr. and Mrs. GASCHKEWITCH in 1864. E. CANDÈZE again worked on a collection of G. LEWIS's, which had been collected from 1869 to 71 in the southern part of Japan such as Kagoshima, Nagasaki, Kôbe, etc., and he reported 58 species including 43 new ones in 1873. E. v. HAROLD reported many Coleoptera including some Elaterid-species from the vicinity of Hiogo (Kôbe) in 1875 and 1876, which were sent to him from T. LENZ. In 1878, HAROLD again reported one species as *Athous subcyaneus* MOTSCH., collected by Dr. HILGENDORF in Tôkyô but this seems to be an error for *A. praenobilis* LEWIS. In 1879, L. von HEYDEN has recorded some Coleoptera from Japan, collected by REIN from 1874 to 1875, in which 12 Elaterid-species are

included. In this year, G. LEWIS has reported the diagnoses of 13 new *Elateridae* from Japan, two of which were already known while the other one was mentioned with erroneous supposition of its locality. E. CANDÈZE has described one new species as *Lepturoides miniata* from Japan in 1885, besides this in 1892, *Athous sanguinicollis* of a new species has been described by J. FRIVALDVSZKY. G. LEWIS has reported again in 1894 many species of *Elateridae* brought from Japan by himself in 1882, which were collected on a journey from February, 1880 to November, 1881. In the preface of his paper, he said that the first object is to describe the new species; the second is to adjust certain synonymy, to revise some previous work on the fauna and to note and reject species which have been erroneously introduced to the Japanese Catalogue of Coleoptera published by himself in 1879. The total number of species described as new is 106 and he arranged systematically these new species together with the previous species recorded from Japan. Moreover, he also stated that there are five species, viz. *Elater azurescens* CAND., *Melanotus niger* (typographic error for *piger*) and *laticollis* MOTSCH., *Cardiophorus vulgaris* MOTSCH. and *Agriotes ferrugineipennis* MOTSCH. which are not recognizable by the published descriptions; and nine other species which have been introduced to the Japanese Catalogue in error, viz. *Lacon trifasciatus* CAND., *Elater Reyi* LEW., *Melanoxanthus zebra* WIEDEM., *Limonius cylindricus* PAYK., *Cardiophorus sobrinus* LAP., *Corymbites tessellatus* L., *Corymbites tristus* CAND., *Corymbites lateralis* LEC. and *Corymbites sericeus* GEBL. In these species, *Melanotus piger* MOTSCH. may reasonably be thought as synonymous with *Spheniscosomus restrictus* CAND., and *M. laticollis* MOTSCH. corresponds to *M. legatus* CAND. as it was designated by HEYDEN in 1879, besides the description of *Cardiophorus vulgaris* is representing the outline of *C. pinguis* LEWIS which is considered to corresponds with the *vulgaris* reported by MOTSCHULSKY from Japan in 1866. On the other hand, we can perceive that *Agriotes ferrugineipennis* MOTSCH. should be transfered to the genus *Dolopius* and come to the synonymy of *D. marginatus* L., while *Lacon trifasciatus* CAND. was considered to be synonymous with *L. microcephalus* MOTSCH. and *L. dificilis* LEW. Finally, the species so closely allied to *Corymbites lateralis* LEC. has been collected at Hakodate in Hokkaidô, to which the author could not give a name except this, and he has reduced this species to the Japanese Catalogue. In 1895, G. LEWIS has

described *Athous praenobilis* which has made an error of determination for this as *A. subcyaneus* MOTSCH. in 1894. E. FLEUTIAUX reported some Elaterids, with the descriptions of 13 new species in 1900 and 1902, which had been collected by J. HARMAND from 1894 to 1897 in central Japan. The present author has described 26 new species with the mention of one unrecorded species from Japan, during the past seven years from 1927 to 1933. Among the species described up to 1933, some have been revised in my present investigation.

The new or revised species are as follows:

Lacon quadrinodatus LEWIS=*Adelocera quadrinodata*
Alaus pini LEWIS=*Alaus putridus* CANDÈZE
Heteroderes agnatus (CANDÈZE)=*Aeoloderma agnata* (1929)
Megapenthes higonius LEWIS=*Agriotes* (1929)
Megapenthes insidiosus LEWIS=*Agriotes*
Megapenthes versipellis LEWIS=*Melanoxanthus* (1933)
Megapenthes opacus CANDÈZE=*Melanoxanthus*
Megapenthes bicarinatus LEWIS=*Pengamethes*
Megapenthes flavolineatus MIWA=*Limonius imitans* LEWIS
Megapenthes purpureipennis MIWA=*Limonius eximius* LEWIS
Hypnoidus saxatilis (LEWIS)=*Scoliocerus*
Hypnoidus expansicollis (LEWIS)=*Scoliocerus*
Hypnoidus fluviatilis (LEWIS)=*Scoliocerus*
Hypnoidus humeralis (CANDEZE)=*Crypnoidus*
Hypnoidus curatus (CANDÈZE)=*Zorochrus*
Hypnoidus insulsus (CANDÈZE)=*Zorochrus*
Hypnoidus telluris (LEWIS)=*Curtisius*
Hypnoidus albipilis (CANDÈZE)=*Crypnoidus*
Hypnoidus brevis MIWA=*Crypnoidus albipilis* (CANDÈZE)
Quasimus agilis (LEWIS)=*Zorochrus*
Quasimus cinefactus (LEWIS)=*Zorochrus*
Quasimus punctatus MIWA=*Quasimus ellipticus* (CANDÈZE)
Cardiophorus pinguis and *niponicus* LEWIS=*C. vulgaris* MOTSCHULSKY
Cardiophorus pauper CANDÈZE=*Phatynychus* (1933).
Cardiophorus rameus LEWIS=*Platynychus pauper* (CANDÈZE)
Cardiophorus nothus CANDÈZE=*Platynychus*
Cardiophorus adjutor CANDÈZE=*Platynychus*

Cardiophorus ferrugineipennis LEWIS=*Platynychus*
Melanotus laticollis MOTSCHULSKY=*M. legatus* CANDÈZE (teste: HEYDEN, 1879).
Harminius galloisi MIWA=*H. singularis* LEWIS
Harminius nikkoensis MIWA=*H. singularis*, var.
Athous subcyaneus MOTSCHULSKY=*A.* (*Heterathous*) *virens* LEWIS (1895)
Athous testaceipennis MIWA=*Corymbites* (*Neoplistilophus*)
Corymbites otsukae MIWA=*C. aerosus* LEWIS
Corymbites suzukii MIWA=*C. pruinosus* MOTSCHULSKY, var.
Corymbites praenobilis LEWIS=*C. notabilis* CANDÈZE, var.
Corymbites onerosus LEWIS=*C. pacatus* LEWIS
Pittonotus montanus MIWA=*Pheletes*
Pittonotus aenescens MIWA=*Pheletes*

(New Species)

Elater longipennis sp. nov.
Elater galloisi sp. nov.
Athous (*Crepidophorus*) *montanus* sp. nov.
Corymbites (*Selatosomus*) *kurofunei* sp. nov.
Corymbites (*Selatosomus*) *tengu* sp. nov.
Hypnoidus mirabilis sp. nov.
Orithales yezoensis sp. nov.

The total number of species as indigenous to Japan is 220 as is shown in the following distribution list.

The Japanese fauna have some tropical factors belonging to Oriental regions in addition to the many Palaearctic factors and it seems to the author that some insular modifications have occured in the archipelago as compared with the fauna of Corea, both of which are included in the same fauna of the Manchurian subregion. Now he says after LEWIS's supposition that some species of *Elateridae* in Japan are extremely local, remaining at a time as a little colony in or near one tree for many generations so that there can be hardly any doubt that the number of species yet to be discovered must be very considerable, and the fact that the many endemic species have been described from Japan, is showing a particular Japanese fauna of a branch of the Palaearctic region.

The Distribution List of the Species Indigenous to Japan

Species \ Localities	1. Europe & Siberia	2. Saghalien & Kuriles	Japan 3. Hokkaidô	4. Honshiu	5. Shikoku	6. Kiushiu	7. Loo-Choo	8. Formosa	9. Corea	10. China	Other Localities
1. *Adelocera maklini* CANDÈZE			×	×		×					Bonin Islands
2. *A. antennata* LEWIS			×								
3. *A. parallera* LEWIS			×								
4. *A. quadrinodata* LEWIS			×								
5. *Lacon binodulus* MOTSCHULSKY			×	×	×	×	×		×		
6. *L. fuliginosus* CANDÈZE				×	×	×	×			×	
7. *L. cordicollis* CANDÈZE			×	×	×	×					
8. *L. scutellaris* CANDÈZE				×			×				
9. *L. albomaculatus* MIWA				×							
10. *L. brunneus* LEWIS				×							
11. *L. scrofa* CANDÈZE			×	×	×	×	×			×	
12. *L. tumens* CANDÈZE					×		×				Indo-China
13. *L. microcephalus* MOTSCHULSKY			×	×	×	×	×				Indo-China, Ceylon
14. *Meristhus niponensis* LEWIS			×		×						
15. *M. scobinula* CANDÈZE					×		×			×	India, Texus, Mexico.
16. *Alaus berus* CANDÈZE			×	×	×	×	×				Laos.
17. *A. putridus* CANDÈZE				×	×	×	×			×	Indo-Chida, Java Bonin Islands
18. *Tetrigus lewisi* CANDÈZE			×	×	×	×	×	×	×	×	
19. *Pectocera fortunei*, CANDÈZE			×	×	×	×	×			×	
20. *Aeoloderma agnata* CANDÈZE			×	×	×						
21. *Elater niponicus* LEWIS			×	×	×	×					
22. *E. scutellaris* LEWIS			×	×							
23. *E. longipennis* MIWA			×								
24. *E. convexicollis* LEWIS			×								
25. *E. galloisi* MIWA			×								

Species \ Localities	1	2	3	4	5	6	7	8	9	10	Other Localities
26. *Elater rotundicollis* MIWA			×								
27. *E. azurescens* CANDÈZE				×							
28. *E. ainu* LEWIS			×	×							
29. *E. chlamydatus* LEWIS				×							
30. *E. montanus* LEWIS			×	×							
31. *E. orientalis* LEWIS			×	×							
32. *E. fagi* LEWIS			×	×							
33. *E. optabilis* LEWIS			×	×		×					
34. *E. canalicollis* LEWIS				×							
35. *E. miles* LEWIS						×					
36. *E. puniceus* LEWIS				×							
37. *E. rubridorsus* LEWIS						×					
38. *E. sanguinolenthus* SCHRANK	×	×	×								
39. *E. gracilipes* LEWIS				×							
40. *E. vestitus* LEWIS				×	×	×					
41. *E. ivanovi* JAKOBSON				×		×					
42. *E. hypogastricus* CANDÈZE			×	×	×	×					
43. *E. rufipes* LEWIS				×	×	×					
44. *E. carbunculus* LEWIS				×	×	×					
45. *E. tenuistriatus* LEWIS				×	×	×					
46. *E. parvulus* LEWIS						×					
47. *E. pauxillus* LEWIS				×							
48. *E.* (*Ectamenogonus*) *bicarinatus* CANDÈZE			×	×	×	×					
49. *E.* (*E.*) *rugipennis* LEWIS				×							
50. *Megapenthes cariniceps* LEWIS			×	×							
51. *M. fujisanus* LEWIS				×							
52. *M. bifoveolatus* LEWIS				×	×	×					
53. *M. japonicus* FLEUTIAUX				×							
54. *M. insignitus* LEWIS				×	×	×					
55. *M. humeralis* MIWA				×	×	×					

Species \ Localities	1	2	3	4	5	6	7	8	9	10	Other Localities
56. *Megapenthes flavus* FLEUTIAUX				×							
57. *M. gracilis* CANDÈZE				×	×	×					
58. *Pengamethes bicarinatus* LEWIS						×		×			
59. *P. pallidus* LEWIS				×		×					
60. *Melanoxanthus opacus* CANDÈZE			×	×							
61. *M. versipellis* LEWIS			×	×	×	×					
62. *M. pictipennis* LEWIS				×							
63. *M. similis* LEWIS				×							
64. *Anchastus aquilis* CANDÈZE				×							
65. *A. mus* LEWIS				×							
66. *A. rufipes* LEWIS				×		×					
67. *Hypnoidus quadrillum* CANDÈZE			×	×							
68. *H. optatus* LEWIS				×							
69. *H. interstinctus* LEWIS				×							
70. *H. cruciatus* CANDÈZE				×							
71. *H. modestus* LEWIS						×					
72. *H. difficilis* LEWIS			×								
73. *H. rivalis* LEWIS			×	×							
74. *H. nitidus* FLEUTIAUX				×							
75. *Crypnoidus humeralis* CANDÈZE						×					
76. *C. albipilis* CANDÈZE				×							
77. *Scoliocelus saxatilis* LEWIS			×	×							
78. *S. expansicollis* LEWIS			×								
79. *S. fluviatilis* LEWIS				×							
80. *Curtisius telluris* LEWIS			×	×	×	×					
81. *Zorochrus cinefactus* LEWIS				×							
82. *Z. agilis* LEWIS				×							
83. *Z. insulsus* CANDÈZE						×					
84. *Z. tutus* LEWIS		×		×							
85. *Z. lewisi* SCHWARZ				×							

Species \ Localities	1	2	3	4	5	6	7	8	9	10	Other Localities
86. *Zorochrus curatus* CANDÈZE				×	×	×		×			
87. *Quasimus luteipes* CANDÈZE						×		×			
88. *Q. angustatus* MIWA					×						
89. *Q. carinicollis* LEWIS				×							
90. *Q. minutissimus* GERMAR	×			×	×	×					Caucasus, Asia-minor
91. *Q. ellipticus* CANDÈZE				×	×	×		×			
92. *Q. ovalis* CANDÈZE				×	×	×		×			Sumatra
93. *Cardiophorus vulgaris* MOTSCHULSKY	×		×	×							
94. *C. lewisi* FLEUTIAUX				×							
95. *C. subaeneus* FLEUTIAUX				×							
96. *C. opacus* LEWIS				×		×					
97. *Paracardiophorus musculus* ERICHSON	×		×								
98. *P. pullatus* CANDÈZE		×	×	×	×	×			×		
99. *P. sequens* CANDÈZE				×	×	×					
100. *Platynychus ferrugineus* LEWIS						×					
101. *P. nothus* CANDÈZE						×					Algeria, Caucasus
102. *P. pauper* CANDÈZE			×	×	×	×					
103. *P. adjutor* CANDÈZE				×	×	×	×	×	×		
104. *Spheniscosomus cetc* CANDÈZE				×	×	×					
105. *S. restrictus* CANDÈZE				×				×	×		
106. *Melanotus castanipes* PAYKULL	×	×	×	×							N. America, Asia-minor, Caucasus
107. *M. seniculus* CANDÈZE				×	×	×					
108. *M. erythropygus* CANDÈZE			×	×	×	×			×		
109. *M. harmandi* FLEUTIAUX				×							
110. *M. invectitius* CANDÈZE				×	×	×					
111. *M. caudex* LEWIS				×	×	×					
112. *M. spernendus* CANDÈZE				×	×	×					
113. *M. issikii* MIWA						×					
114. *M. lewisi* SCHENKLING				×	×	×					
115. *M. legatus* CANDÈZE		×	×	×	×	×	×		×	×	

Species \ Localities	1	2	3	4	5	6	7	8	9	10	Other Localities
116. *Melanotus correctus* CANDÈZE . . .				×							
117. *M. annosus* CANDÈZE				×	×	×	×		×		
118. *M. ocellatopunctatus* LEWIS . . .			×								
119. *M. senilis* CANDÈZE			×	×	×	×	×				
120. *M. piger* MOTSCHULSKY				×					×	×	
121. *Limonius approximans* LEWIS . . .				×							
122. *L. ignicollis* LEWIS			×	×							
123. *L. eximius* LEWIS				×							
124. *L. atricolor* LEWIS				×	×	×					
125. *L. vittatus* CANDÈZE			×	×							
126. *L. imitans* LEWIS				×							
127. *L. rufipennis* LEWIS					×	×					
128. *L. brunneus* LEWIS				×							
129. *L. montivagus* LEWIS				×							
130. *L. niponensis* LEWIS			×								
131. *L. marginipennis* LEWIS				×							
132. *L. marginicollis* LEWIS				×							
133. *Pheletes montanus* MIWA				×							
134. *P. aenescens* MIWA		×	×	×							
135. *Harminius singularis* LEWIS		×	×	×							
136. *H.* (*Diacanthous*) *undosus* LEWIS		×	×	×							
137. *H.* (*D.*) *ainu* MIWA			×								
138. *Athous* (*Stenagostus*) *umbratilis* LEWIS				×	×	×	×				
139. *A. praenobilis* LEWIS				×	×	×	×				
140. *A. secessus* CANDÈZE					×	×	×				
141. *A. sinuatus* LEWIS					×	×					
142. *A. harmandi* FLEUTIAUX				×							
143. *A. suturalis* CANDÈZE				×							
144. *A. comes* LEWIS			×								
145. *A. porrecticollis* LEWIS			×	×							

Species \ Localities	1	2	3	4	5	6	7	8	9	10	Other Localities
146. *Athous* (*Heterathous*) *virens* CANDÈZE				×	×	×					
147. *A.* (*H.*) *isshikii* MIWA . . .				×		×					
148. *A.* (*H.*) *desertor* CANDÈZE .				×							
149. *A.* (*H.*) *sanguinicollis* FRIVALDSZKY				×		×					
150. *A.* (*Crepidophorus*) *montanus* MIWA			×	×							
151. *A.* (*Grypathous*) *inornatus* LEWIS		×	×								
152. *A.* (*G.*) *jactatus* LEWIS . .			×	×							
153. *Corymbites* (*Anostirus*) *daimio* LEWIS			×	×	×	×					
154. *C.* (*Actenicerus*) *pruinosus* MOTSCHULSKY			×	×	×	×					
155. *C.* (*A.*) *odaisanus* MIWA . .				×							
156. *C.* (*A.*) *aerosus* LEWIS . . .				×		×					
157. *C.* (*A.*) *modestus* LEWIS . .				×							
158. *C.* (*A.*) *selectus* CANDÈZE .			×								
159. *C.* (*A.*) *flavipennis* LEWIS .				×							
160. *C.* (*Neopristilophus*) *onerosus* LEWIS				×	×	×					
161. *C.* (*N.*) *vagepictus* LEWIS .				×	×	×					
162. *C.* (*N.*) *dilatatus* MIWA . .		×	×								
163. *C.* (*N.*) *serrifer* CANDÈZE .				×	×	×					
164. *C.* (*N.*) *testaceipennis* MIWA			×								
165. *C.* (*Selatosomus*) *puncticollis* MOTSCHULSKY		×	×	×							
166. *C.* (*S.*) *rugosus* GERMAR . .	×	×	×								
167. *C.* (*S.*) *lateralis* LECONTE .			×								Canada
168. *C.* (*S.*) *notabilis* CANDÈZE .				×		×			×		
169. *C.* (*S.*) *alpensis* MIWA . . .				×							
170. *C.* (*S.*) *motschulskyi* FLEUTIAUX				×							
171. *C.* (*S.*) *hypocrita* LEWIS . .		×	×	×							
172. *C.* (*S.*) *kurofunei* MIWA . .				×							
173. *C.* (*S.*) *tengu* MIWA				×							
174. *C.* (*Paranomus*) *puerilis* CANDÈZE				×	×	×					
175. *C.* (*P.*) *mundulus* LEWIS . .		×	×	×		×					

Species \ Localities	1	2	3	4	5	6	7	8	9	10	Other Localities
176. *Corymbites (Metactenicerus) gratus* LEWIS			×	×	×	×					
177. *C. (M.) nikkoensis* JAKOBSON				×							
178. *C. (M.) rubripennis* LEWIS				×							
179. *C. (M.) chlamydatus* LEWIS				×		×					
180. *C. (M.) concolor* LEWIS				×		×					
181. *C. (M.) obscuripes* LEWIS				×							
182. *C. (M.) lewisi* FLAUTIAUX				×							
183. *Hypoganus japonicus* FLEUTIAUX				×							
184. *H. mirabilis* MIWA				×							
185. *Orithales yezoensis* MIWA			×								
186. *Yezodima convexum* MIWA		×	×								
187. *Y. aeneonigra* MIWA			×								
188. *Ludius sieboldi* CANDÈZE			×	×	×	×	×	×			
189. *L. niponensis* LEWIS			×		×			×	×		
190. *L. candezei* LEWIS						×					
191. *Neotrichophorus linteatus* CANDÈZE				×	×						
192. *N. junior* CANDÈZE			×	×		×					
193. *N. plebejus* CANDÈZE			×	×	×	×	×	×	×		
194. *Aphanobius unicolor* FLEUTIAUX				×							
195. *Agriotes sericeus* CANDÈZE		×	×	×							
196. *A. longicollis* LEWIS				×							
197. *A. persimilis* LEWIS		×	×	×							
198. *A. puberulus* MIWA			×	×							
199. *A. sepes* LEWIS				×	×						
200. *A. exulatus* CANDÈZE						×					
201. *A. elegantulus* LEWIS				×	×						
202. *A. leucophaeatus* CANDÈZE						×					
203. *A. higonius* LEWIS						×					
204. *A. insidiosus* LEWIS				×							
205. *A. helvolus* CANDÈZE			×	×							

Species \ Localities	1	2	3	4	5	6	7	8	9	10	Other Localities
205. *Agriotes parustris* LEWIS				×							
207. *A. ogurae* LEWIS				×							
208. *A. fuscicollis* MIWA		×	×								
209. *A. yasumatsui* MIWA						×					
210. *Agonischius obscuripes* GYLLENHAL						×	×	×	×	×	Indo-China, India, Caucasus
211. *Dolopius marginatus* LINNAEUS	×	×	×	×		×					
212. *Sericus viridus* LEWIS				×	×	×					
213. *Glyphonyx illepidus* CANDÈZE				×	×	×	×				
214. *Silesis musculus* CANDÈZE			×	×	×	×	×		×		
215. *S. scabripennis* LEWIS			×	×		×					
216. *Adrastus patagiatus* LEWIS			×	×							
217. *Denticollis versicolor* LEWIS				×							
218. *D. miniatus* CANDÈZE			×	×	×						
219. *D. scutellaris* LEWIS				×	×	×					
220. *D. oculatus* LEWIS				×		×					
	7	19	80	175	67	98	18	18	15	8	

ELATERIDAE OF JAPAN

Subfamily AGRYPNINAE FLEUTIAUX

Genus ADELOCERA LATREILLE

1. Pronotum without nodule; elytra punctate-striate.....(2)
1′. Pronotum with two pairs of nodules; elytra without striation.....*quadrinodata*
2. Antennae shortened, not serrate; aach joint rather broader than long.....*antennata*
2′. Antennae serrate; each joint longer than wide.....(3)
3. Body not parallel sided; elytral striation distinct; 17 mm.....*maklini*
3′. Body parallel sided; elytral striation obsolescent; 12 mm.....*parallela*

1. Adelocera maklini CANDÈZE (Pl. I, f. 1)

Elat. nouv., I, (Mém. Acad. Belg.) p. 6, (1865) (Japan); Mem. Soc. Sc. Liége, p. 1, (1873).—LEWIS, Ann. Mag. Nat. Hist., (6) XIII, p. 27, (1894) (Sapporo, Junsai and Wadatôge).—MATSUMURA, 6000 Illustr. Ins, Japan, p. 179, 386 ♂, (1931).—MIWA, Mushi, VI, No. 2. p. 69, (1933) (Sobosan).

Hab.—Hokkaidô: Sapporo 1–VIII, 1881 (G. LEWIS); 7–VIII, 1916 (R. TAKAHASHI). Ogasawara (Bonin-islands): Chichjima 20–VIII, 1905 (S. MATSUMURA).

Distr.—Japan (Hokkaidô, Honshiu and Kiushiu) and Bonin-islands.

2. Adelocera antennata LEWIS

Ann. Mag. Nat. Hist., (6) XIII, p. 27, (1894) (Sapporo).

Distr.—Japan (Hokkaidô).

3. Adelocera parallela LEWIS (Pl. I, f. 2)

Ann. Mag. Nat. Hist., (6) XIII, p. 28, (1894) (Sapporo).

Hab.—Hokkaidô: Sapporo 16–VII, 1928 (Y. MIWA); Junsainuma 7–VII, 1918 (M. SUZUKI).

Distr.—Japan (Hokkaidô).

4. Adelocera quadrinodata LEWIS (Pl. I, f. 3)

Ann. Mag. Nat. Hist., (6) XIII, p. 28, (*Lacon*) (1894) (Oyayama).

Hab.—Hokkaidô: Sapporo VI, 1925 (Y. MIWA); Sapporo 2–VI, 1929 (H. KÔNO).

Distr.—Japan (Hokkaidô and Kiushiu).

Genus LACON LAPORTE DE CASTELNAU

Key to the Species

1. Pronotum with a conspicuous antescutellar elevation.....(7)

1′. Pronotum without such elevation.....(2)
2. Elytra covered with uniform coloured piles.....*scrofa*
2′. Elytra covered with variegated scale-like piles.....(3)
3. Pronotum with a pair of distinct nodulous projections.....(5)
3′. Pronotum with a pair of obtuse transverse nodules which are sometimes oblite-rated.....(4)
4. Scutellum with white scale-like piles.....*scutellaris*
4′. Scutellum not white.....*fuliginosus*
5. Pronotum with a pair of white spots congested with dense scale-like piles.....*albomaculatus*
5′. Pronotum without such spot.....(6)
6 Prothorax dilated anteriorly.....*ocrdicollis*
6′. Prothorax not dilated anteriorly.....*binodulus*
7. Elytra with diffused punctation and lacking regular striation.....(8)
7′. Elytral punctures set in somewhat irregular rows and the interestices smooth.....*brunneus*
8. Elytra with three fasciae of white scale-like piles.....*microcephalus*
8′. Elytra without fascia.....*tumens*

5. Lacon binodulus MOTSCHULSKY (Pl. I. f. 5)

Etud. Ent., IX, p. 8, (1860) (Japan).—CANDÈZE, Mem. Soc. Sc. Liége, (2) V, p. 2, (1873) (Hiogo); Rév. Mon., pp. 47 & 72, (1874).—HAROLD, Abhandl. Nat. Ver. Bremen, p. 129, (1876) (Hingo).—HEYDEN, Deutsche Ent. Zeitschr., XXIII, p. 348, (1879) (Mino and Hiogo); Horae Soc. Ent. Ross., XXI, p. 256, (1887) (Corea).—SCHOENFELDT, Ent. Nachr., XVI, p. 172, (1890) (Loo-Choo).—LEWIS, Ann. Mag. Nat. Hist., (6) XVII, p. 336, (1896).—MATSUMURA, Thous. Ins. Japan, I, No. 3, p. 102, Pl. 49, f. 3, (1906).—OKAMOTO, Bull. Agr. Ex. St. Govern. Chosen, I, No. 2, p. 182, (1924) (Quelpart island).—MIWA, Trans. Nat. Hist. Soc. Formosa, XIX, No. 103, pp. 341 & 343, (1929) (Tanegashima); ibid., XXI, No. 116, p. 259, (1831) (Kumeshima); Mushi, VI, No. 1, pp. 27 & 29, (1933) (Kiushiu); ibid., No. 2, p. 72, (1933) (Hakuba and Nikkô).—YUASA, in Icon. Ins. Jap. (Nihon Konchiu Zukan), p. 650, f. 1274, (1932).

Hab.—Hokkaidô: Sapporo VII, 1924, (Y. MIWA); Aoyamaonsen VI, 1928 (Y. MIWA); Mt. Daisetsu VII, 1928 (Y. MIWA); Lake Dôya to Mt. Usu VII, 1928 (Y. MIWA). Honshiu: Utsunomiya VIII, (M. NAKAMURA); Shizuoka VII, 1930 (M. CHÛJÔ); Suzaka in Shinano 18–VI, 1932 (K. SATÔ); Wakayma V, 1929 (S. SAKAGUCHI); Mt. Daisen in Hôki 19–VIII, 1932 (K. ÔBAYASHI). Shikoku: Nishio 16–VI, 1932 (K. ÔBAYASHI). Kiushiu: Ubasha 7–VII, 1932 (T. SHIRAKI); Komoda to Tsutsu in Tsushima 28–VII, 1930 (H. HORI);

Minamitane in Tanegashima 11-VII, 1928 (S. Minowa); Takachihonomine 17-VII, 1933 (H. HORI).

Distr.—Japan, Corea and Loo-Choo.

6. Lacon fuliginosus CANDÈZE (Pl. I, f. 4)

Elat. nouv., I, (Mém. Acad. Belg.) p. 10, (1865) (Japan); Rév. Mon., pp. 47 & 69, (1874).—HAROLD, Abhandl. Nat. Ver. Bremen, p. 129, (1876) (Higo).—HEYDEN, Deutsche Ent. Zeitschr., XXIII, p. 348, (1879) (Mino and Hiogo); ibid., XXX, p. 286, (1886) (Peking).—LEWIS, Ann. Mag. Nat. Hist., (6) XVII, p. 336, (1896).—MIWA, Trans. Nat. Hist. Soc. Formosa, XIX, No. 103, pp. 341 & 343, (1929) (Yakushima); ibid., XXI, No. 115, p. 259, (1931) (Kumeshima); Mushi, VI, No. 1, p. 27, (1933) (Kiushiu).—YUASA, in Icon. Ins. Jap. (Nihon Konchiu Zukan), p. 651, f. 1276, (1932).

Hab.—Honshiu: Meguro in Tôkyô VII, 1909 (T. SHIRAKI); Shinjuku in Tôkyô 26-VI, 1913 (E. GALLOIS); Miho in Suruga VI, 1930 (S. SATÔ); Gifu 4-VI (M. YANAGIHARA); Kanazawa V, 1924 (S. TAKANO); Suzaka in Shinano 18-VI, 1932 (K. SATÔ); Obuse in Shinano 4-VI, 1932 (K. SATÔ); Takasago V, 1913 (T. SHIRAKI). Kiushiu: Kagoshima 31-VII 1932 (T. SHIRAKI); Takachihonomine 17-VII, 1933 (H. HORI); Yakushima 30-IV, 1929 (S. ISSIKI).

Distr.—Japan (Honshiu, Shikoku and Kiushiu), Loo-Choo and China?

7. Lacon cordicollis CANDÈZE (Pl. I, f. 6)

Elat. nouv., I, (Mém. Acad. Belg.) p. 9, (1865) (Japan); Mém. Soc. Sc. Liége, (2) V, p. 3. (1873).—LEWIS, Ann. Mag. Nat. Hist, (6) XVIII, p. 336, (1896).—YUASA, in Icon. Ins. Jap. (Nihon Konchiu Zukan), p. 651, f. 1275, (1932).—MIWA, Mushi VI, No. 1, p. 27, (1933) (Sobosan).

Hab.—Hokkaidô: Maruyama in Sapporo 19-VII, 1939 (K. IGARASHI). Honshiu: Shiriya in Tsugaru 7-VIII, 1927 (H. KÔNO); Gifu 4-VII, (Y. YANAGIHARA). Shikoku: Ochiai 13-VI, 1932 (K. ÔBAYASHI).

Distr.—Japan.

8. Lacon scutellaris CANDÈZE

Elat. nouv., V, (Mém. Acad. Belg.) p. 9, (1893) (Amami-Oshima).—LEWIS, Ann. Mag. Nat. Hist., (6) XVII, p. 336, (1896) (Yokohama).

Distr.—Japan (Honshiu) and Loo-Choo (Ôshima).

As far as the author's investigation has gone, the species from Honshiu seems to be *L. fuliginosus*, because some of the latters collected from Honshiu have white scales on the scutellum. The type from Oshima is unknown to the author.

9. Lacon albomaculatus sp. nov. (Pl. I, f. 7)

Fuscous, a little shining, thickly covered with brownish and ashy grey scale-like piles intermixed. Head triangularly impressed in the middle, slightly turned upwards at the frontal margin, very evenly and rather strongly punctured, the punctures ocellate and very deep. Prothorax convex, with the sides rather straight, rather densely and very deeply punctured, with a pair of nodules on the disk and at just outside of each of them a white circular spot congested with dense greyish scale-like pile; hind angles short and truncate at the apex; scutellum nearly pentagonal and slightly concave. Elytra strongly punctate-striate, the interestices not convex or concave, with dense but rather uneven punctation. Antennae dark reddish. Legs pitchy brown, with the tarsi cast-aneous and the claws reddish. Closely resembles *L. binodulus* MOTSCH. and *L. fuliginosus* CAND., but the prothorax straight at the side and not sinuate, the pronotal nodules very faint and the median canaliculation rather oblitelated. In general outline, it can easily be identified by the white maculation on the pronotum.

Length: 15 mm. Width: 4 mm.

Hab.—Honshiu: Gifu VII, 1914 (Y. MIWA).

10. Lacon brunneus LEWIS

Ann. Mag. Nat. Hist., (6) XIII, p. 29, (1894) (Oyama).

Distr.—Japan (Honshiu).

11. Lacon scrofa CANDÈZE (Pl. I, f. 9)

Mém. Soc. Sc. Liége, (2) V, p. 4, (1873) (Japan).—KOLBE, Arch. Naturg., LII, p. 197, (1836) (Corea).—MATSUMURA, 6000 Illustr. Ins. Japan, p. 185, No. 422, f. ♀, (1931).—YUASA, in Icon. Ins. Jap. (Nihon Konchiu Zukan), p. 652, f. 1277, (1932).—MIWA, Mushi, VI, No. 1, p. 27, (1933) (Kiushiu); ibid., No. 2, p. 72, (1933) (Yoshino).

Hab.—Hokkaidô: Mt. Acan VII, 1928 (H. KÔNO and C. WATANABE). Honshiu: Kôbe 6-VI, 1881 (G. LEWIS); Karuizawa VI, 1913 (E. GALLOIS); Gifu VI, M. YANAGIHARA); Wakayama V, (?); Mt. Suzuka between Ômi and Ise VIII, 1922 (Y. MIWA); Tamagawa V, 1918 (H. TAKABAYASHI); Kôbe 6-VIII, 1881 (G. LEWIS); Ichinotani at Suma 16-VI, 1930 (M. SUZUKI). Shikoku: Takamatsu X, 1920 (Y. MIWA). Kiushiu: Ôita VIII, (T. OTSUKA).

Distr.—Japan Loo-Choo and Corea.

The species which has been reported from Formosa as *L. scrofa* LEWIS, in "Trans. Nat. Hist. Soc. Formosa, XIX, No, 102, p. 229, 1929" is *L. musculus* CAND.

12. Lacon tumens CANDÈZE

Mém. Soc. Sc. Liége, (2) V, p. 4, (1873) (Japan); Rév. Mon., p. 49, (1874)

(Japan).—FLEUTIAUX, Ann. Soc. Ent. Fr., LXXXVII, p. 195, (1918) (Combodja). —MIWA, Trans. Nat. Hist. Soc. Formosa, XIX, No. 102, p. 232, (1929) (Formosa).

Distr.—Japan (Kiushiu?), Formosa and Cambodja.

13. Lacon microcephalus MOTSCHULSKY (Pl. I, f. 8)

Etud. Ent., VII, p. 60, (*Brachylacon*) (1858) (Ceylon); Bull. Soc. Nat. Mosc., XXXIV, p. 5. 9, f. 9, (1861) (Ceylon).—FLEUTIAUX, Ann. Soc. Ent. Fr., LXXXVII, p. 194, (1918) (Cambodja); Philip. Journ. Sc., p. 220, (1916) (Philippines).—MIWA, Trans. Nat. Hist. Soc. Formosa, XXI, p. 86, (1931) (Formosa); Mushi VI, No. 1, pp. 27 & 29, (1933) (Amakusa and Tsushima).

=*difficilis* LEWIS, Ann. Mag. Nat. Hist., (6) XIII, p. 29, (1894) (Nagasaki).

=*trifasciatus* CANDÈZE, Elat. nouv., I, (Mém. Acad. Belg.) p. 10, (1865) (Ceylon); Mém. Soc. Sc. Liége, (2) V, p. 1, (1873) (Japan); Rév. Mon., p. 85, (1874) (Borneo); Ann. Soc. Ent. Belg., XXXVI, p. 485, (1892) (Bengal, Sikkim and Cochin-China); Ann. Mus. Genova, (2) XIV, p. 486, (1894) (Sumatra).

Hab.—Honshiu: Nara 10-VII, 1915 (?). Shikoku: Tosa VIII, 1910 (S. ARAKAWA). Kiushiu: Nagasaki 29-III, 1881 (G. LEWIS); Kumamoto 20-V, 1907 (H. KAWAMURA), Kechi in Tsushima 29-VII, 1930 (H. HORI).

Distr.—Japan (Honshiu, Shikoku and Kiushiu), Loo-choo (Ôshima), Formosa, Chambodja, Cochin-China, Philippines, Borneo, Sumatra, Bengal, Sikkim and Ceylon.

Genus MERISTHUS CANDÈZE

Key to the Species

1. Elytra with two pairs of white spots of scales; the carination of pronotal posterior angles conspicuous; $4\frac{1}{2}$ mm ..... *niponensis*
1′. Elytra without such spot; the carination of pronotal posterior angles obliterated; $2\frac{1}{2}$ mm ..... *scobinula*

14. Meristhus niponensis LEWIS (Pl. I, f. 10).

Ann. Mag. Nat. Hist., (6) XIII, p. 30, (1894) (Niigata).—MIWA, Mushi, VI, No. 2, p. 69, (1933) (Fukuoka).

Hab.—Honshiu: Niigata 4-IX, 1881 (G. LEWIS); Seto in Kii VIII, 1930 (M. TOKUNAGA).

Distr.—Japan (Honshiu).

15. Meristhus scobinula CANDÈZE (Pl. I, f. 11)

Mon., I, p. 164, t. 2, f. 26, (1857) (China and Mexico); Mém. Soc. Sc. Liége, p. 5, (1873) (Japan); Rév. Mon., p. 104, (1874) (India, China and Central America).—LEWIS, Ann. Mag. Nat. Hist., (6) XIII, p. 30, (1894) (Nagasaki).—MIWA, Trans. Nat. Hist. Soc. Formosa, XXI, No. 113, p. 87, (1931) (Formosa).

=*setarius* CHEVROLAT, Ann. Soc. Ent Fr., (4) VII, p. 596, (1867) (Cuba).

=*texanus* HORN, Trans. Ent. Soc. Amer., III, p. 300, t. 4, f. 1, (1871); ibid. V, 1874-76, p. 148, (1875) (Central America).

Hab.—Kiushiu: Nagasaki 29-III, 1881 (G. LEWIS).

Distr.—Japan (Kiushiu), Formosa, China, India, Texas, Mexico, Guatemala, Cuba and Columbia.

Subfamily HEMIRRHIPINAE FLEUTIAUX

Genua ALAUS ESCHSCHOLTZ

Key to the Species

1. Elytra emarginate at the extremities ..... *putridus*
1′. Elytra not emarginate at the extremities ..... *berus*

16. Alaus berus CANDÈZE (Pl. I, f. 13)

Elat. nouv., I, (Mem. Acad. Belg.) p. 15, (1864) (Japan: Nagasaki); Rév. Mon., p. 129, (1874) (Japan).—HAROLD, Abhandl. Nat. Ver. Bremen, p. 130, (1876) (Hiogo).—MIWA, Trans. Nat. Hist. Soc. Formosa, XIX, No. 102, pp. 236 & 238, (1929) (Formosa); ibid., No. 103, pp. 341 & 344, (1929) (Loo-Choo); ibid., XXI No. 116, p. 259, (1931) (Nago); Mushi, VI, No. 1, p. 29, (1933) (Tsushima); ibid., No. 2, p. 69, (1933) (Fukuoka).—MATSUMURA, 6000 Illustr. Ins. Japan, p. 181, f. 395, (1931) (fig. 394 errata).

Hab.—Honshiu: Bukenji at Kanagawa X, 1881 (G. LEWIS). Shikoku: Koyadahira in Awa 21-VII, 1913 (E. GALLOIS); Matsuyama in Iyo 19-V, 1910 (S. ARAKAWA). Kiushiu: Kumamoto 15-I, 1907 (H. KAWAMURA); Izuhara to Uchiyama in Tsushima 25-V, 1930 (T. ESAKI).

Distr.—Japan (Honshiu, Shikoku), Loo-Choo, Formosa and Laos (after W. Junk's Cat. Col., 80, 1925).

17. Alaus putridus CANDÈZE (Pl. I, f. 15)

Mon., I, p. 233, t. 4, f. 15, (1857) (Java); Rév. Mon., pp. 121 & 140, (1874).—HEYNE & TASCHENBERG, Exot. Käf., p. 152, t. 25, f. 8, (1908) (Malacca).—SZOMBÀTHY, Ann. Mus. Nat Hung., VII, p. 121, (1909) (Formosa).—MIWA, Trans. Nat. Hist. Soc. Formosa, XIX, No. 102, p. 237, (1929) (Formosa); ibid.

No. 103, pp. 342 & 344, (1929) (Ishigaki and Ogasawara); Mushi, VI, No. 1, p. 29, (1933) (Tsushima).—MATSUMURA 6000 Illustr. Ins. Japan, pp. 181 & 394, (1931) (fig. 395 errata).

=*larvatus* CANDÈZE, Rév. Mon., pp. 121 & 141, (1874) (Shanghai).—FLEUTIAUX, Ann. Soc. Ent. Fr., LXXXVII, p. 197, (1918) (Tonkin and Annam); Wien. Ent. Zeit., XLVII (2), p. 97, (1930) (Formosa).

=*pini* LEWIS, Ann. Mag. Nat. Hist., (6) XIII, p. 30, (1894) (Nagasaki, Kumamoto, Konosé and Hagi).—SZOMBÀTHY, Ann. Mus. Nat. Hung., VII, p. 121, (1909) (Formosa).—MIWA, Trans. Nat. Hist. Soc. Formosa. XIX, No. 102, p. 237, (1929) (Formosa).

Hab.—Kiushiu: Konose 29-IV, 1881 (G. LEWIS); Komoda in Tsushima 28-VII, 1930 (H. HORI & G. CHÔ); Nagasaki 23-V, 1831 (G. LEWIS). Ogasawara: Chichijima 20-VIII, 1905 (S. MATSUMURA).

Distr.—Japan (Southern extremity of Honshiu, Shikoku and Kiushiu), Bonin Islands, Loo-Choo (Ôshima and Ishigaki), Formosa, China (Shanghai), Tonkin, Annam, Java and Malacca.

Genus TETRIGUS CANDÈZE

18. Tetrigus lewisi CANDÈZE (Pl. I, f. 12 ♀, 12a ♂)

Mém. Soc. Sc. Liége, (2) V, p. 6, (1873) (Japan and China: Amoy and Shanghai); Rev. Mon., pp. 156 & 157, (1874) (Japan and China).—OKAMOTO, Bull. Agr. Ex. St. Gov. Gen. Chosen, I, No. 2, p. 182, (1924) (Corea and Loo-Choo).—FLEUTIAUX, Wien Ent. Zeit., XLVII (2), p. 97, (1930) (Formosa).—MIWA, Mushi, VI, No. 1 p. 29, (1933) (Tsushima); ibid., No. 2, p. 69, (1933) (Wakasugiyama).

=*grandis* LEWIS, Ent. Monthl. Mag., XVI, p. 155, (1879) (Nagasaki); Ann. Mag. Nat. Hist., (6) XIII, p. 31, (1894) (Nagasaki, Kôbe and Sapporo).

Hab.—Hokkaidô: Sapporo ♀ 5-VIII, 1830 (G. LEWIS). Honshiu: Kôbe 6-VI, 1881 (G. LEWIS); Yunoyama in Ise 10-VIII, 1916 (Y. MIWA); Wakayama VI, 1930 (S. SAKAGUCHI). Shikoku: Kôyadahira in Awa 21-VII, 1913 (E. GALLOIS).

Distr.—Japan, Corea, Loo-Choo?, Formosa and China.

This species seems to be synonymous with *T. flabellatus* GERMAR, from it's faunastic point of view, but the type of the latter is unknown to the author.

Subfamily OXYNOPTERINAE SCHENKLING

Genus PECTOCERA HOPE

19. Pectocera fortunei CANDÈZE (Pl. I, f. 14 ♀, 14a ♂)

Mém. Soc. Sc. Liége, (2) V, p. 6, (1873) (China: Chusan and Japan: Hiogo); Rév. Mon., p. 207, (1874).—LEWIS, Ann. Mag. Nat. Hist., (6) XIII, p. 31, (1894) (Nagasaki, Kumamoto, Nikkô and Chiuzenji).—MATSUMURA, Thous. Ins. Japan, III, p. 101, Pl. XLIX, f. 2, ♀ (1905) (Honshiu and Kiushiu); 6000 Illustr. Ins. Japan, p. 188, No. 478 ♀, (1931).—MIWA, Trans. Nat. Hist. Soc. Formosa, XIX, No. 102, p. 239, (1929) (Formosa); ibid., No. 103, pp. 342 & 344, (Loo-Choo); ibid., XXI, No. 116, p. 159, (1931) (Naze); Mushi, VI, No. 1, p. 27, (1933) (Kiushiu).—FLEUTIAUX, Wien. Ent. Zeit., XLVII, 2, p. 97, (1930) (Formosa).—YUASA, in Icon. Ins. Jap. (Nihon Konchiu Zukan), p. 650, f. 1273, (1932).

Hab.—Hokkaidô: Sapporo ♀ VI, 1924 (Y. MIWA). Honshiu: Nikkô VI, 1880 (G. LEWIS); Mt. Amagi in Idzu 10-VI, 1929 (S. KATÔ); Gifu 18-VI, 1923 (M. YANAGIHARA). Kiushiu: Nagasaki 15-VII, 1930 (Y. MIWA); Takachihonomine 17-VII, 1933 (H. HORI) (Col. Ent. Inst., Kiushiu Imp. Univ.).

Distr.—Japan, Loo-Choo, Formosa and China.

Subfamily CONODERINAE FLEUTIAUX

20. Aeoloderma agnata CANDÈZE (Pl. I, f. 19)

Mém. Soc. Sc. Liege, (2) V, p. 8, (*Aeolus*) (1873) (Japan); Cat. Elat., p. 83, (*Heteroderes*) (1891) (Japan).—SCHWARZ, in Wytsman, Gen, Ins., 46, Elat. p. 100, (*Monocrepidius*) (1906) (Japan).—SCHENKLING, in JUNK's Col. Cat., Pars 80, Elat. I, p. 105 (*Conoderus*) and p. 137 (*Heteroderes*) (1925) (Japan).—MIWA Trans. Nat. Hist. Soc. Formosa, XIX, No. 103, pp. 341 & 344, (1929) (Kuchinoerabu-shima); Mushi, VI, No. 1, pp. 27 & 29, (1933) (Fukuoka and Tsushima); ibid., No. 2, p. 69, (1933) (Amakusa; ibid., p. 72, (Hanazono).—MATSUMURA, 6000 Illustr. Ins. Japan, p. 188, No. 441, (*Prodrasterius*) (1931).—YUASA, in Icon. Ins. Jap. (Nihon Konchiu Zukan), p. 649, f. 1272, (1932).

Hab.—Honshiu: Yokohama V, 1880 (G. LEWIS); Tôkyô 2-VI, 1912 (H. TAKABAYASHI); Gifu 8-VI, 1923 (M. YANAGIHARA). Kiushiu: Kuchinoerabu-shima 11-VII, 1928 (S. MINOWA).

Distr.—Japan (Honshiu, Shikoku and Kiushiu).

Subfamily ELATERINAE SCHAUFUSS

Genus ELATER LINNAEUS

Subgenus ELATER s. str.

Key to the Species

1. Thorax and elytra differ in colour.....(2)
1'. Thorax and elytra correspond in colour.....(19)

2. Elytra with black spot ..... (3)
2′. Elytra unicolourous ..... (6)
3. Elytra with the apices black ..... *niponicus*
3′. Elytra with the disk longitudinally black ..... (4)
4. Elytra three and a half times as long as wide ..... *galloisi*
4′. Elytra iwo and a half times shorter as it is wide ..... *sanguinolenthus*
5. Scutellum nearly vertical and acuminate behind ..... *scutellaris*
5′. Scutellum not vertical and obtusely acuminate behind ..... (6)
6. Elytra bright cinnabar red; interstices alternately elevated ..... (17)
6′. Interstices moderate ..... (7)
7. Body with greyish pubescence; antennae infuscate, second and third joints nearly equal; legs infuscate, with the tarsi somewhat paler; elytra reddish brown; 8½ mm ..... *convexicollis*
7′. Third joint of antennae longer than the second ..... (8)
8. Elytra about two and four fifth times as long as the width ..... *longipennis*
8′. Elytra usually two and a half times shorter as it is wide ..... (9)
9. Body with long black pubescence; antennae and legs dusky black; tarsi pitchy ... (10)
9′. Pubescence, antennae and legs not black ..... (15)
10. Prothorax somewhat wide, convex on the pronotal disk, arched at sides; elytra red but not very bright, interstices rather broad and flat, feebly and transversly rugose, apices not infuscate; longer than 10 mm ..... (11)
10′. Body usually shorter than 10 mm; elytra with the apices sometimes narrowly and minutely infuscate ..... (14)
11. Prothorax rounded anteriorly, with the sides well arched and narrowing forward from the base; 12½ mm ..... *rotundicollis*
11′. Prothorax not rounded anteriorly, with the sides especially arched and the widest at the middle ..... (12)
12. Prothorax densely black, neither opalescent nor azurescent ..... (13)
12′. Prothorax with an azurescent tint; elytra obscure coccineous ..... *azurescens*
13. The interstices of elytral striations convex; head with a fovea between the eyes ..... *rubridorsus*
13′. The interestices rather broad and flat; head without fovea ..... *ainu*
14. Prothorax relatively longer, not arched at the sides; scutellum not depressed; elytra dull red, interstices transversely rugose; the third joint of antennae scarcely longer than the second; 9½ mm ..... *chlamydatus*
14′. Prothorax moderate; scutellum depressed in front; elytra redish, interstices finely punctured; the third joint of antennae much longer than the second; 8–9½ mm ..... *montanus*
15. Body with remarkably long tawny pubescence; antennae with the three basal joints brownish, dilated joints infuscate ..... (16)

15′ Body with grey or fulvous pubescence; antennae with the three basal joints usually reddish, others infuscate; elytra clear brown or reddish; 10½–11 mm ..... *orientalis*
16. Elytra reddish yellow like legs ..... *fagi*
16′. Elytra reddish; legs dusky, the tarci brownish ..... *optabilis*
17. Antennae from the fourth joint serrate; pronotum canaliculate ..... *canalicollis*
17′. Antennae from the third joint serrate; pronotum not canaliculate ..... (18)
18. Prothorax with the sides straight and gradually narrowing anteriorly from the base ..... *puniceus*
18′. Prothorax with the sides arched and the widest at the middle ..... *miles*
19. Body with tawny pubescence ..... (20)
19′. Body without tawny pubecence ..... (23)
20. Elongate, rather narrow, dusky brown; elytra faintly punctate-striate, humeral angle obscure brown; antennae reddish brown, slender, articulation somewhat lax, the third joint less robust and slightly longer than the second; legs dusky brown, the tibiae and tarsi reddish brown; 9½ mm ..... *gracilipes*
20′. Rather robust, wholly black; elytra moderately punctate-striate; antennae red or sometimes infuscate, the third joint more or less longer than the second; legs reddish brown ..... (21)
21. Thickly covered with pubescence ..... *vestitus*
21′. Pubescence moderate ..... (22)
22. Head and prothorax relatively broader, with much finer punctures; thorax not opalescent; elytral interstices rather flatter, and distinctly wider, and the form generally more parallel than those of *hypogastricus;* scutellum rather wider and not acuminate behind; abdomen usually black; 12 mm ..... *ivanovi*
22′. Prothorax opalescent; scutellum relatively small and acuminate behind; abdomen commonly bright red but rarely black ..... *hypogastricus*
23. Body with griseous pubescence; antennae with the basal joint red, the second and third nearly equal in length and pitchy coloured, others infuscate; legs clear red; 7–8 mm ..... *rufipes*
23′. Antennae with the third joint more or less longer than the second; legs usually black except the tarsi ..... (24)
24. Black shining with blackish or ashy pubescence; antennae entirely black, the second joint very small, the third widened out triangularly and scarcely smaller than the fourth; 7 mm ..... *carbunculus*
24′. Dusky or greyish pubescent; antennae with the third joint obconical, shorter and narrower than the fourth ..... (25)
25. Body with dusky pubescence; elytra with the striae scarcely punctured, interstices flat, lightly punctured and feebly rugose; antennae black, rather slender,

articulation a little lax, the third one fourth longer than the second; legs black the tarsi and claws reddish brown; 10-11 mm.....*tenuistriatus*

25′. Body with greyish pubescence; usually shorter than 6 mm.....(26)

26. Scutellum acuminate behind; antennae moderately serrate, wholly black, the second joint a little shorter than the third which is nearly obconical; legs and bassal joint of tarsi black, the claws and other joints reddish; 5½ mm...*parvulus*

26′. Scutellum obtuse behind; antennae red, not serrate, the second joint stouter and a little shorter than the third; legs wholly red; eyes relatively prominent; 5 mm.....*pauxillus*

21. Elater niponicus LEWIS (Pl. II, f. 9)

Ann. Mag. Nat. Hist., (6) XII, p. 32, (1894) (Chiuzenji, Miyanoshita, Kiga and Oyayama).

Hab.—Hokkaidô: Sapporo 15-V, 1904 (S. MATSUMURA). Honshiu: Chiuzenji 19-VIII, 1881 (G. LEWIS). Shikoku: Iyo 19-V, 1910 (S. ARAKAWA).

Distr.—Japan.

22. Elater scutellaris LEWIS (Pl. II, f. 6)

Ann. Mag. Nat. Hist., (6) XIII, p. 35, (1894) (Chiuzenji, Niohôzan and Sapporo)

Hab.—Hokkaidô: Sapporo 20-V, 1904 (S. MATSUMURA). Honshiu: Hakone 15-IV, 1830 (G. LEWIS); Chiuzenji VI, 1830 (G. LEWIS).

Distr.—Japan (Hokkaidô and Honshiu).

23. Elater longipennis sp. nov. (Pl. VII, f. 20)

Black, shining, with fine fulvous pubescence. Head convex, boarsely and unevenly punctured; frontal carina rather obliterated and vertical in the middle. Prothorax convex, with the sides excurved, the broadest at the base, gradually narrowing anteriorly, very finely and sparsely punctulate on the disk, but rather denser on the lateral sides; hind angles acute and slightly turend outwards, with a carinated ridge; scutellum tongue-shaped, faintly punctured and rather feebly rugose. Elytra dull reddish, punctate-striate, the intertices rather plane, finely punctulate. Antennae pitchy black, the second joint the shortest and nearly globose, the third triangular and nearly half as long as the second and fourth combined. Legs black, with the tarsi reddish. This species is peculier in its long elytra in which it measures three and a half times as long as wide.

Length: 10 mm. Width: 2½ mm.

Hab.—Tokugô-tôge in Shinano 2-VIII, 1931 (K. ÔBAYASHI).

24. Elater convexicollis LEWIS (Pl. II, f. 5)

Ann. Mag. Nat. Hist., (6) XIII p. 34, (1894) (Nikkô).

Hab.—Honshiu: Nikkô VI, 1880 (G. LEWIS), Chichibu 11-VI, 1915 (H. TAKABAYASHI).

Distr.—Japan (Honshiu).

25. Elater galloisi sp. nov. (Pl. VII, f. 21)

Black, very shining, clothed with fine long fulvous pubescence. Head slightly convex, very coarsely and rather unevenly punctured; frontal carina well marked and semicircular. Prothorax convex, the broadest at the base, gradually and gently narrowing anteriorly with the sides slightly arched in the middle, very finely and rather evenly punctured on the disk of the pronotum, but more densely on the lateral sides; hind angles acute and slightly turned outwards, with a conspicuous carinated ridge, the interspace between the carina and the lateral margin strongly rugose; scutellum tongue-shaped, rather plane, depressed in the anterior part, with a fine and uneven punctulation. Elytra elongate, dark reddish, the sutural and second interstices entirely and the third to fifth only at the basal part infuscate, with fine but strong punctured striae, all the interstices rather flattened, feebly punctulate and transversely rugose. Antennae fuscous, opaque, with the second joint shortest, the third slightly longer, the fourth elongate triangular and nearly as long as the preceding two joints combined. Legs bright reddish.

The elytra of this species much elongate and longer than three and a half times as it is wide. The coloration of the body is also peculiar by its dark reddish elytra and infuscate sutural interstices.

Length: 10¼ mm. Width; 2½ mm.

Hab.—Chiuzenji 22-VII, 1917 (E. GALLOIS).

26. Elater rotundicollis MIWA

Ins. Mats., II, No. 1, p. 16, pl. I, f. 8 ♂, (1927) (Sapporo).

Hab.—Hokkaidô: Sapporo 10-VI, 1925 (Y. MIWA).

Distr.—Japan (Hokkaidô).

27. Elater azurescens CANDÈZE

Elat. nouv. I, (Mém. Roy. Acad. Belg.) p. 29, (1865) (Japan).

Distr.—Japan.

28. Elater ainu LEWIS (Pl. VIII, f. 22)

Ann. Mag. Nat. Hist., (6) XIII, p. 35, (1894) (Ishikari river).—MATSUMURA, Thous. Ins. Japan., I, No. 3, p. 111, t. 49, f. 22, (1906).

Hab.—Hokkaidô: Sapporo 26-V, 1930 (K. IGARASHI) 5-VI, 1930 (H. KÔNO); Teshio

3-VII, 1930 (H. KÔNO); Rishiri VII, (K. DOI); Toikanbetsu in Teshio 14-VII, 1930 (T. SHIRAKI).

Distr.—Japan (Hokkaidô).

29. Elater chlamydatus LEWIS

Ann. Mag. Nat. Hist., (6) XIII, p. 36, (1894) (Kadzusa).

Distr.—Japan (Honshiu).

30. Elater montanus LEWIS (Pl. II, f. 4)

Ann. Mag. Nat. Hist., (6) XIII, p. 36, (1894) (Nikkô).

Hab.—Hokkaidô: Sapporo VII, 1928 (Y. MIWA). Honshiu: Chiuzenji 20-VIII, 1881 (G. LEWIS).

Distr.—Japan (Hokkaidô and Honshiu).

31. Elater orientalis LEWIS (Pl. II, f. 3)

Ann. Mag. Nat. Hist., (6) XIII, p. 33, (1894) (Nikkô, Miyanoshita, Hakone and Kashiwagi).—MATSUMURA, 6000 Illustr. Ins. Japan, p. 184, No. 415, (1931).

Hab.—Hokkaidô: Sapporo 26-V, 1930 (K. IGARASHI); Lake Dôya to Mt. Usu VII, 1928 (Y. MIWA). Honshiu: Syria VII, 1913 (S. ARAKAWA); Miyanoshita V, 1880 (G. LEWIS); Kashiwagi 19-VI, 1881 (G. LEWIS); Kamikôchi 16~22-VII, (K. KAMIYA); Mt. Togakushi in Shinano 20-VI, 1932, (K. SATÔ).

Distr.—Japan (Hokkaidô and Honshiu).

32. Elater fagi LEWIS

Ann. Mag. Nat. Hist., (6) XIII, p. 34, (1894) (Subashiri and Hakone).

Hab.—Hokkaidô: Sapporo VI, 1924 (Y. MIWA). Honshiu: Subashiri V, 1880 (G. LEWIS).

Distr.—Japan (Hokkaidô and Honshiu).

33. Elater optabilis LEWIS (Pl. II, f. 2)

Ann. Mag. Nat. Hist., (6) XIII, p. 33, (1894) (Subashiri, Ômine and Oyayama). MATSUMURA, Thous. Ins. Japan, I, No. 3, p. 112, t. 49, f. 24 ♀, (1906); 6000 Illustr. Ins. Japan, p. 184, No. 414 ♀, (1931).

Hab.—Hokkaidô: Sapporo 10-VI, 1928 (Y. MIWA); Mt. Acan VII, 1928 (H. KÔNO); Sapporo VII, 1928 (Y. MIWA); Teshio 3-VII, 1930 (H. KÔNO); Sôunbetsu near Mt. Daisetsu 24-VII, 1926 (H. KÔNO). Honshiu: Miyanoshita V, 1880 (G. LEWIS).

Distr.—Japan (Hokkaidô, Honshiu and Kiushiu).

34. Elater canalicollis LEWIS (Pl. II, f. 8)

Ann. Mag. Nat. Hist., (6) XIII, p. 38, (1894) (Bukenji, Oyama and Miyanoshita).

Hab.—Honshiu: Oyama V, 1880 (G. LEWIS).

Distr.—Japan (Honshiu).

35. Elater miles LEWIS

Ann. Mag. Nat. Hist., (6) XIII, p. 37, (1894) (Oyayama).

Hab.—Kiushiu: Oyayama in Higo IV, 1881 (G. LEWIS).

Distr.—Japan (Kiushiu).

36. Elater puniceus LEWIS (Pl. II, f. 7)

Ent. Monthl. Mag., XVI, p. 156, (1879) (Aomori); Ann. Mag. Nat. Hist., (6) XIII, p. 37, (1894) (Noheji and Sannohe).

Hab.—Honshiu: Noheji IX, 1880 (G. LEWIS); Subashiri V, 1880 (G. LEWIS); Kashiwabara in Shinano 20-VI, 1932 (K. SATÔ).

Distr.—Japan (Honshiu).

37. Elater rubridorsus LEWIS

Ent. Monthl. Mag., XVI, p. 155, (1879) (Taisho in Tsushima).

Distr.—Japan (Kiushiu: Tsushima).

38. Elater sanguinolenthus SCHRANK (Pl. II, f. 10)

Beytr. Naturgesch., p. 69, t. 3, f. 15, (1776).—MATSUMURA, Journ. Agr. Col. Sapporo, Imp. Univ. Tôhoku, Japan, IV, p. 120, (1911) (Saghalien).—MIWA, Zool. Monthl. Mag. Tôkyô, PLI, p. 444, (1929) (Kuriles).

Hab.—Hokkaidô: Sapporo 8-VI, 1928 (Y. MIWA); 26-V, 1930 (C. WATANABE).

Distr.—Europe, Siberia, Saghalien, Kuriles and Japan (Hokkaidô).

39. Elater gracilipes LEWIS

Ann. Mag. Nat. Hist., (6) XIII, p. 42, (1894) (Chiuzenji).

Distr.—Japan (Honshiu).

40. Elater vestitus LEWIS (Pl. II, f. 11)

Ann. Mag. Nat. Hist., (6) XIII, p. 39, (1894) (Miyanoshita, Hakone, Hitoyoshi and Yuyama).

Hab.—Honshiu: Miyanoshita V, 1880 (G. LEWIS). Shikoku: Kôyadahira in Awa VII, 1913 (E. GALLOIS). Kiushiu: Yuyama 11-V, 1881 (G. LEWIS).

Distr.—Japan (Honshiu, Shikoku and Kiushiu).

41. Elater ivanovi JAKOBSON (Pl. II, f. 14)

Žuki Rossiji, 1905-16, p. 750 (1913) (nom. nov.).

=*nigroventris* (nec. REITTER, 1889) LEWIS, Ann. Mag. Nat. Hist., (6) XIII, p. 42, (1894) (Miyanoshita and Oyayama).

Hab.—Japan (2 specimens without date).

Distr.—Japan (Honshiu and Kiushiu).

42. Elater hypogastricus CANDÈZE (Pl. II, f. 13)

Mém. Soc. Sc. Liege, (2) V, p. 9, (1873) (Japan).—LEWIS, Ann. Mag. Nat. Hist., (6) XIII, p. 38, (1894) (Nagasaki, Miyanoshita Oyama, Sado and Junsai).—MIWA, Mushi, VI, No. 1, pp. 27 & 29, (1933) (Korasan, Tempaizan and Tsushima); ibid., No. 2, pp. 69 & 72, (Inunakiyama, Sobosan and Daisen).

Hab.—Hokkaidô: Sapporo 10-VI, 1929 (H. KÔNO), 26-V, 1930 (H. KÔNO). Honshiu: Oyama IV, 1880 (G. LEWIS); Furuma in Shinano 22-V, 1932 (K. SATÔ). Shikoku: Iyo 9-V, 1914 (S. ARAKAWA). Kiushiu: Nagasaki 3-IV, 1881 (G. LEWIS); Oyayama IV, 1881 (G. LEWIS); Konose 29-IV, 1881 (G. LEWIS); Uchiyama to Tsutsu via Se in Tsushima 26-V, 1930 (T. ESAKI). Takachihonomine 17-VII, 1933 (H. HORI) (Col. Ent. Inst., Kiushiu Imp. Univ.).

Distr.—Japan.

The following varieties have been found in this species.

var. 1, Abdomen wholly black.

Hab.—Honshiu: M. Takao 9-VI, 1914 (E. GALLOIS).

var. 2, Only last ventral segment reddish.

Hab.—Honshiu: Mt. Takao 18-V, 1913 (E. GALLOIS).

var. 3, Two apical segments reddish.

Hab.—Honshiu: Tôkyô V, 1928 (Y. MIWA); Takao V, (?), Mukôgaoka at Kanagawa 29-VI, 1928 (K. SATÔ).

var. 4, Three apical segments reddish.

Hab.—Honshiu: Takao 2-VII, (?); Toba in Ise VII, 1924 (Y. MIWA); Mure in Shinano 21-V, 1932 (K. SATÔ).

var. 5 Basal segment black only.

Hab.—Hokkaidô: Sapporo 10-VI, 1929 (H. KÔNO).

43. Elater rufipes LEWIS (Pl. II, f. 75)

Ann. Mag. Nat. Hist., (6) XIII, p. 40, (1894) (Miyanoshita, Hakone, Oyama and Konosé).

Hab.—Honshiu: Oyama 25-V, 1880 (G. LEWIS). Shikoku: Takamatsu in Sanuki X, 1920 (Y. MIWA). Kiushiu: Kônose 18-V, 1881 (G. LEWIS).

Distr.—Japan (Honshiu, Shikoku and Kiushiu).

44. Elater carbunculus LEWIS (Pl. II, f. 16)

Ent. Monthl. Mag., p. 156, (1879) (Awomori Bay); Ann. Mag. Nat. Hist., (6) XIII, p. 40, (1894) (Miyanoshita, Hitoyoshi and Oyama).—MIWA, Mushi, VI, No. 1, p. 29, (1933) (Tsushima); ibid., No. 2, p. 70, (Inunakiyama and Hômansan).

Hab.—Honshiu: Miyanoshita V, 1880 (G. LEWIS). Shikoku: Iyo VII, 1910 (S. ARAKAWA). Kiushiu: Iyo VII, 1910 (S. ARAKAWA). Takachihonomine 22-VII, 1933 (H. HORI) (Col. Ent. Inst., Kiushiu Imp. Univ.).

Distr.—Japan (Honshiu, Shikoku and Kiushiu).

45. Elater tenuistriatus LEWIS (Pl. II, f. 72)

Ann. Mag. Nat. Hist., (6) XIII, p. 39, (1894) (Kiga, Miyanoshita, Chiuzenji, Nikkô and Yuyama).

Hab.—Honshiu: Miyanoshita V, 1880 (G. LEWIS); Nikkô VI, 1880 (G. LEWIS). Shikoku: Imabaru V, (?). Kiushiu: Yuyama 1-V, 1881 (G. LEWIS); Beppu 10-VIII, 1918 (S. ARAKAWA).

Distr.—Japan (Honshiu, Shikoku and Kiushiu).

46. Elater parvulus LEWIS

Ann. Mag. Nat. Hist., (6) PIII, p. 41, (1894) (Yuyama).

Distr.—Japan (Kiushiu).

47. Elater pauxillus LEWIS

Ann. Mag. Nat. Hist., (6) XIII, p. 42, (1894) (Nikkô).

Hab.—Honshiu: Lake Towada 13-VII, 1930 (K. KAMIYA).

Distr.—Japan (Honshiu).

Subgenus ECTAMENOGONUS BUYSSON

Key to the Species

1. Body slender; antennae serrate from the third joint which is similar to the fourth in the shape and size; 10 mm.....*bicarinatus*

1'. Body robust; antennae serrate from the fourth joint with the third obconical and smaller than the fourth; 12 mm.....*rugipennis*

48. Elater (Ectamenogonus) bicarinatus CANDÈZE (Pl. II, f. 18)

Mém. Soc. Sc. Liége, p. 9, (1873) (Japan).—LEWIS, Ann. Mag. Nat. Hist., (6) XIII, p. 41, (1894) (Nagasaki, Mayasan and Sapporo).—MIWA, Mushi, VI, No. 2, pp. 70 & 72, (1933) (Wakasugiyama, Sobosan and Hanazono).

Hab.—Honshiu: Shizuoka 31-VIII, 1892 (C. WATANABE); Ichinotani 16-VI, 1930

(M. SUZUKI). Shikoku: Kôyadahira in Awa 7-VIII, 1913 (E. GALLOIS).
Distr.—Japan.

49. Elater (Ectamenogonus) rugipennis LEWIS (Pl. II, f. 17)

Ann. Mag. Nat. Hist., (3) XIII, p. 41, (1894) (Kyôto and Oyama).—Miwa, Mushi, VI, No. 2, p. 72, (1933) (Minomo).

Hab.—Honshiu: Oyama 24-V, 1880 (G. LEWIS).
Distr.—Japan (Honshiu).

Genus MEGAPENTHES KIESENWETTER

Key to the Species

1. Head with a median longitudinal carina.....*cariniceps*
1′. Head without any carina.....(2)
2. Pronotum more or less foveolate.....(3)
2′. Pronotum without fovea.....(4)
3. Bronzy black; pronotum with a feeble circular impression on either side behind the middle; antennae black, legs obscure red, with the femora darker; 7 mm.....*fujisanus*
3′. Aeneous; pronotum with a pair of well marked foveae before the middle; legs clear reddish brown; abdominal segments sometimes reddish; $9\frac{3}{4}$–$10\frac{1}{2}$ mm.....*bifoveolatus*
4. Pronotum with double carinae on the hind angles; third joint of antennae longer than the fourth; basal plates of hind coxae angulate and suddenly narrowing outwards; body brownish black with the elytra and pronotal margin reddish; the ventral part, antennae and legs ferrugineous; $8\frac{1}{2}$–$9\frac{1}{2}$ mm.....*japonicus*
4′. Pronotum with single carina; third joint of antennae shorter than the fourth; basal plates moderate.....(5)
5. Black, somewhat opaque; elytra with four yellowish stripes; antennae dusky brown; legs testaceous; $5\frac{3}{4}$–6 mm.....*insignitus*
5′. Elytra without any spot.....(6)
6. Black, with bronzy shining; elytra reddish at the base; head excavate, with the frontal carina depressed in the middle; pronotum with a median canaliculation; 10 mm.....*humeralis*
6′. Testaceous; head convex, with the frontal carina well arched anteriorly; pronotum without canaliculation; 4–5 mm.....*flavus*

50. Megapenthes cariniceps LEWIS (Pl. VII, f. 24)

Ann. Mag. Nat. Hist., (6) XIII, p. 45, (1894) (Kiga).

Hab.—Hokkaidô: Sapporo 10-VI, 1928 (Y. MIWA). Honshiu: Chiuzenji 10-VII, 1917 (E. GALLOIS).
Distr.—Japan (Honshiu).

51. Megapenthes fujisanus LEWIS

Ann. Mag. Nat. Hist., (6) XIII, p. 44, (1893) (Subashiri).
Distr.—Japan (Honshiu).

52. Megapenthes bifoveolatus LEWIS (Pl. III, f. 1)

Ann. Mag. Nat. Hist., (6) XIII, p. 45, (1894) (Oyayama, Ichiuchi, Oyama, Nikkô, Chiuzenji and Miyanoshita).

Hab.—Honshiu: Nikkô ♀, VI, 1880; 16-V, 1881 (G. LEWIS). Shikoku: Nishio 16-VI, 1932 (K. ÔBAYASHI).
Distr.—Japan (Honshiu, Shikoku and Kiushiu).

53. Megapenthes japonicus FLEUTIAUX

Bull. Mus. Hist. Nat. Paris, VIII, No. 1, p. 19, (1902) (Japan).
Distr.—Japan (Honshiu).

54. Megapenthes insignitus LEWIS (Pl. II, f. 20)

Ann. Mag. Nat. Hist., (6) XIII, p. 46, (1894) (Miyanoshita and Yokohama).—MIWA, Mushi, VI, No. 2, p. 72, (1933) (Hanazono, Minomo, Kibune and Takao).

Hab.—Honshiu: Subashiri 4-V, 1880 (G. LEWIS); Oyama 25-V, 1880 (G. LEWIS); Gifu 10-IV (Y. MIWA); Mt. Takao 6-V, 1912 (H. TAKABAYASHI); Hirao in Shinano 14-V, 1932 (K. SATÔ). Shikoku: Mt. Tsurugi 18-VI, 1932 (K. ÔBAYASHI). Kiushiu: Yuyama 10-V, 1881 (G. LEWIS).
Distr.—Japan (Honshiu, Shikoku and Kiushiu).

55. Megapenthes humeralis MIWA (Pl. III, f. 2)

Ins. Mats., II, No. 1, p. 21, Pl. 1, f. 17 ♂, (1927) (Towada); Mushi, VI, No. 1, p. 28, (1933) (Sobosan); ibid., No. 2, p. 70, (Hikosan).

Hab.—Honshiu: Lake Tôwada VII, 1927 (Y. MIWA). Shikoku: Kôyadahira in Awa 4-VII, 1927, Mt. Tsurugi 6~7-VII, 1927 (T. ADACHI). Kiushiu: Sobosan in Bungo 3-VIII, 1931 (K. YASUMATSU).
Distr.—Japan (Honshiu, Shikoku and Kiushiu).

56. Megapenthes flavus FLEUTIAUX

Bull. Mus. Hist. Nat. Paris, VIII, No. 1, p. 19, (1902) (Japan).
Distr.—Japan (Honshiu?).

This seems to be synonymous with *Agriotes helvolus* CANDÈZE in it's description.

57. Megapenthes gracilis CANDÈZE (Pl. III, f. 3)

Mém. Soc. Sc. Liége, (2) V, p. 10, (1873) (Japan).—LEWIS, Ann. Mag. Nat. Hist., (6) XIII, p. 46, (1894) (Kiga, Yokohama, Kyôto and Kumamoto).—MIWA, Mushi, VI, No. 2, p. 70, (1933) (Sangunzan, Inunakiyama and Korasan).

Hab.—Honshiu: Mt. Takao 16–V, 1915 (H. TAKABAYASHI); Yokohama 10–IV, 1880 (G. LEWIS); Toyono in Shinano 13–V, 1932; Suzaka 18–VI, 1932 (K. SATÔ); Hanazono near Kyôto 24–V, 1926 (M. SUZUKI); Gifu 10–VI, (Y. MIWA); Onomichi 8–VIII, 1931 (K. ÔBAYASHI). Kiushiu: Kumamoto 24–VI, 1881 (G. LEWIS); Mt. Kirishima 3–V, 1929 (S. ISSIKI).

Distr.—Japan (Honshiu, Shikoku and Kiushiu).

Genus PENGAMETHES FLEUTIAUX

Key to the Species

1. Body dusky brown; pronotum with double carinae on each hind angle...*bicarinatus*
1′. Body yellowish; pronotum with single carina on each hind angle .....*pallidus*

58. Pengamethes bicarinatus LEWIS (Pl. II, f. 19)

Ann. Mag. Nat. Hist., (6) XIII, p. 43, (*Megapenthes*) (1894) (Nagasaki).—MIWA, Trans. Nat. Hist. Soc. Formosa, XIX 105, p. 494, (*Megapenthes*) (1929) (Formosa); Mushi, VI, No. 2, p. 70, (*Megapenthes*) (1933) (Sobosan).

Hab.—Kiushiu: Nagasaki III, 1881 (G. LEWIS).

Distr.—Japan (Kiushiu).

59. Pengamethes pallidus LEWIS (Pl. VII, f. 23)

Ann. Mag. Nat. Hist., (6) XIII, p. 46, (*Megapenthes*) (1894) (Nikkô and Natakusugawa).—MIWA, Mushi, VI, No. 2, p. 70, (1933) (Yakushima).

Hab.—Honshiu: Nikkô 23–VII, 1881 (G. LEWIS); Yunoyama in Ise VIII, 1925 (Y. MIWA). Kiushiu: Hananoegawa in Yakushima 31–VII, 1929 (H. HORI).

Distr.—Japan (Honshiu and Kiushiu).

Genus MELANOXANTHUS ESCHSCHOLTZ

Key to the Species

1. Densely black; prothorax bright reddish except the sternum; elytra without any spot.....*opacus*

1′. Elytra more or less spotted.....(2)
2. Opaque; prothorax reddish in the female.....*versipellis*
2′. Shiny; prothorax black in both sexes.....(3)
3. Fore- and hind angles of prothorax reddish; basal stripes of elytra straight; 5–6½ mm.....*pictipennis*
3′. Pronotum wholly black; basal stripes of elytra oblique; 4 mm.....*similis*

60. Melanoxanthus opacus CANDÈZE (Pl. II, f. 1)

Mém. Soc. Sc. Liege, (2) V, p. 10, (*Megapenthes*) (1873) (Japan).—LEWIS, Ann. Mag. Nat. Hist., (6) XIII, p. 43, (1894) (Kôbe and Junsai).

Hab.—Hokkaidô: Junsai VIII, 1880 (G. LEWIS).

Distr.—Japan (Hokkaidô and Honshiu).

61. Melanoxanthus versipellis LEWIS (Pl. I, f. 16 ♀ and 17 ♂)

Ann. Mag. Nat. Hist., (6) XIII, p. 47, (*Megapenthes*) (1894) (Chiuzenji, Kashiwagi, Junsai Sapporo and Otaru).—MIWA, Mushi, VI, No. 1, p. 28, (1933) (Sobosan); ibid., No. 2, p. 72, (Hakuba, Kuzu and Kamikôchi).

Hab.—Hokkaidô: Junsai 28–VIII, 1880 (G. LEWIS); Nopporo 29–VI, 1928 (K. SATÔ). Shikoku: Mt. Tsurugi 18–VI, 1932 (K. ÔBAYASHI).

Distr.—Japan.

var. **ornatus** LEWIS.

Ann. Mag. Nat. Hist., (6) XIII, p. 47, (*Megapenthes ornatus*) (1894) (Yuyama).

Hab.—Kiushiu: Yuyama 10–V, 1881 (G. LEWIS).

Distr.—Japan (Kiushiu).

62. Melanoxanthus pictipennis LEWIS

Ann. Mag. Nat. Hist., (6) XIII, p. 48, (1894) (Fukushima and Natakusugawa).

Hab.—Honshiu: Fukushima 26–VII, 1881 (G. LEWIS); Lake Towada 20–VII, 1927 (Y. MIWA).

Distr.—Japan (Honshiu).

63. Melanoxanthus similis LEWIS (Pl. I, f. 18)

Ann. Mag. Nat. Hist., (6) XIII, p. 182, (1894) (Fukushima, Nikkô and Ôsaka).

Hab.—Honshiu: Fukushima 26–VII, 1881 (G. LEWIS).

Distr.—Japan (Honshiu).

Subfamily **PHYSORRHININAE** FLEUTIAUX

Genus **ANCHASTUS** J. LECONTE

Key to the Species

1. Obscure brownish red, somewhat paler at the margin; antennae and legs clear in colour; the third joint of antennae similiar to the fourth; 7–8 mm.....*aquilis*
1′. Wholly black.....(2)
2. Body with griseous pubescence; antennae black, the third joint narrower and slightly longer than the fourth; legs black, the knees and claws reddish; 8 mm.....*mus*
2′. Body with tawny pubescence; antennae reddish brown, the third joint similar to the fourth in size and shape; legs clear red; 7–7½ mm.....*rufipes*

64. Anchastus aquilis CANDÈZE (Pl. III, f. 5)

Mém. Soc. Sc. Liége, (2) V, p. 8, (1873).

Hab.—Honshiu: Kôbe 7-VII, 1881 (G. LEWIS); Yokkaichi in Ise VIII, 1925 (Y. MIWA); Misaki 8-VII, 1928 (H. FURUKAWA).

Distr.—Japan (Honshiu).

65. Anchastus mus LEWIS (Pl. III, f. 6)

Ann. Mag. Nat. Hist., (6) XIII, p. 31, (1894) Miyanoshita).—MIWA, Mushi, VI, No. 2, pp. 70 & 72, (1933) (Wakasugiyama and Nikkô).

Hab.—Honshiu: Miyanoshita 14-V, 1880 (G. LEWIS).

Distr.—Japan (Honshiu).

66. Anchastus rufipes LEWIS (Pl. III, f. 4)

Ann. Mus. Nat. Hist., (6) XIII, p. 32, (1894) (Nikkô and Yuyama).

Hab.—Kiushiu: Yuyama 14-V, 1881 (G. LEWIS).

Distr.—Japan (Honshiu and Kiushiu).

Subfamily **HYPNOIDINAE** FLEUTIAUX

Genus **HYPNOIDUS** STEPHENS

Key to the Species

1. Elytra unicolour.....(7)
1′. Elytra more or less maculate.....(2)
2. Pronotum with a median longitudinal smooth line or carina.....(3)

2′. Pronotum withuot such line or carina.....(6)
3. Pronotum with a median longitudinal carina; body shining, black with cinereous pubescence; elytra with four yellowish spots; legs clear yellow; 3½ mm.....*quadrillum*
3′. Pronotum with a median smooth line.....(4)
4. Black with brassy tinge and ashy grey pubescence; elytra with the humeral angles somewhat paler and the maculation extending backwards to the middle of the fifth interstice; antennae infuscate; legs clear yellow; 3½ mm.....*optatus*
4′. Elytra with four spots.....(5)
5. Black, and shining, with fulvous pubescence; hind angles of pronotum narrowly pale; elytra with an elongate reddish brown spot at the humeral angle on the sixth interstices, and with a discoloured disk before the apex on the fifth interstices; antennae with the basal three joints testaceous, the others infuscate; legs pale, with the thighs dusky; 2¾ mm.....*interstinctus*
5′. Black, opaque, with short pubescence; elytra with the humeral angles broadly reddish brown from the outer edge to the fourth stria, and before the apex there is an indication of a second spot; antennae with the basal two joints obscurely red, others black; legs pale, thighs dusky; 3½ mm.....*modestus*
6. Black, opaque, with griseous pubescence; pronotum finely scabrous; elytra with four yellowish spots; tibiae and tarsi testaceous; 5 mm.....*cruciatus*
6′. Infuscate, little shining, with dense griseous pubescence; hind angles of pronotum obscurely red; elytra obscurely brown at the humeral angle; antennae, with the basal two joints red, others black; legs paler, thighs dusky; 3½ mm.....*difficilis*
7. Brown, shining; head and thorax blackish, with an aeneous tint; pronotum without longitudinal median line; hind angles reddish brown; antennae brown, dusky at the apices of the articulations; legs testaceous; 4¼ mm.....*rivalis*
7. Wholly black, shining; pronotum sinuate at sides; antennae black, with the basal two joints ferrugineous; epipleura of elytra brown; legs yellow; 5 mm.....*nitidus*

67. Hypnoidus quadrillum CANDÈZE (Pl. III, f. 8)

Mém. Soc. Sc. Liége, (2) V, p. 11, (*Cryptohypnus*) (1873).—MIWA, Mushi, VI, No. 2, p. 72, (1933) (Honshiu).

Hab.—Hokkaidô: Hakodate 18-VII, 1880 (G. LEWIS). Honshiu: Yokohama 28-VI, 1928 (S. MINOWA); Tamagawa in Tôkyô 17-V, 1931 (K. KAMIYA).

Distr.—Japan (Hokkaidô and Honshiu).

68. Hypnoidus optatus LEWIS

Ann. Mag. Nat. Hist., (6) XIII, p. 185, (*Cryptohypnus*) (1894) (Ôtsu).

Distr.—Japan (Honshiu).

69. Hypnoidus interstinctus LEWIS

Ann. Mag. Nat. Hist., (6) XIII, p. 185, (*Cryptohypnus*) (1894) (Wada-tôge).
Distr.—Japan (Honshiu).

70. Hypnoidus cruciatus CANDÈZE (Pl. III, f. 9)

Mém. Soc. Sc. Liége, (2) V, p. 11, (*Cryptohypnus*) (1873) (Japan).
Hab.—Honshiu: Tamagawa in Tôkyo 24-V, 1914 (H. TAKABAYASHI).
Distr.—Japan (Honshiu).

71. Hypnoidus modestus LEWIS

Ann. Mag. Nat. Hist., (6) XIII, p. 186, (1894) (Kumamoto).
Distr.—Japan (Kiushiu).

72. Hypnoidus difficilis LEWIS

Ann, Mag. Nat. Hist., (6) XIII, p. 187, (*Cryptohypnus*) (1894) (Hakodate).
Distr.—Japan (Hokkaidô).

73. Hypnoidus rivalis LEWIS (Pl. III, f. 7)

Ann. Mag. Nat. Hist., (6) XIII, p. 184, (*Cryptohpynus*) (1894) (Iwakisan).
Hab.—Hokkaidô: Ohachidahira on Mt. Daisetsu 15-VII, 1926 (H. KÔNO).
Distr.—Japan (Hokkaidô and Honshiu).

74. Hypnoidus nitidus FLEUTIAUX

Bull. Mus. Hist. Nat. Paris, VIII, No. 1, p. 19, (*Cryptohypnus*) (1902) (Japan).
Distr.—Japan (Honshiu?).

Genus CRYPNOIDUS FLEUTIAUX

Key to the Species

1. Black, somewhat shining, with cinereous pubescence; elytra with a yellowish spot on each humeral part; antennae and legs yellowish; 1½–2 mm.....*humeralis*
1′. Black, a little shining, with long white pubescence; elytra not spotted; pronotum closely scabrous; antennae piceous; legs brown, with the tibiae fulvous; 3 mm .....*albipilis*

75. Crypnoidus humeralis CANDÈZE (Pl. III, f. 10)

Mém. Soc. Sc. Liége, (2) V, p. 13, (*Cryptohypnus*) (1873) (Japan).—LEWIS, Ann. Mag. Nat. Hist., (6) XIII. p. 185, (*Cryptohypnus*) (1894) (Nagasaki).
Hab.—Kiushiu: Nagasaki III, 1881 (G. LEWIS).
Distr.—Japan (Kiushiu)

76. Crypnoidus albipilis CANDÈZE (Pl. III, f. 11)

Mém. Soc. Sc. Liege, (2) V, p. 12, (*Cryptohypnus*) (1873) (Japan).
=*brevis* MIWA, Ins. Mats., II, No. 2, p. 107, f. 1, (*Hypnoidus*) (1927) (Tamagawa),
Hab.—Honshiu: Nikaidô in Yamato, 14, VI, 1881 (G. LEWIS); Ôsaka 7-VII, 1881 (G. LEWIS).
Distr.—Japan (Honshiu).

Genus SCOLIOCERUS MOTSCHULSKY

Key to the Species

1. Basal joints of antennae flattened and expanded, nearly semicircular at the anterior margin, with the posterior margin straight.....(2)
1′. Basal joints of antennae robust but not relatively expanded; body griseoes pubescent; antennae reddish brown; legs infuscate; 7 mm.....*fluviatilis*
2. Antennae reddish or dark brown, each joint much constricted at its base; legs dusky; 7½–10 mm .....*saxatilis*
2′. Antennal joints broader and much less constricted at their bases; legs pale yellow as well as antennae; 7 mm.....*expansicornis*

77. Scoliocerus saxatilis LEWIS (Pl. III, f. 12)

Ann. Mag. Nat. Hist., (6) XIII, p. 183, (*Hypolithus*) (1894) (Kiga, Hakone and Chiuzenji).—MIWA, Mushi, VI, No. 2, p. 72, (1933) (Hanazono).
Hab.—Hokkaidô: Sapporo 9-VI, 1926 (K. TAMANUKI). Honshiu: Lake Chiuzenji VI, 1880 (G. LEWIS); River Kiga 17-V, 1830 (G. LEWIS); Tôwada 20-VII, 1928 (Y. MIWA).
Distr.—Japan (Hokkaidô and Honshiu).

78. Scoliocerus expansicornis LEWIS

Ann. Mag. Nat. Hist., (6) XIII, p. 184, (*Hypolithus*) (1894) (Junsai).
Distr.—Japan (Hokkaidô).

79. Scoliocerus fluviatilis LEWIS

Ann. Mag. Nat. Hist., (6) XIII, p. 184, (*Hypolithus*) (1894) (Kashiwagi).
Distr.—Japan (Honshiu).

Genus CURTISIUS nom. nov.

80. Curtisius telluris LEWIS (Pl. III, f. 13)

Ent. Monthl. Mag., p. 156, (*Cryptohypnus*) (1879) (Hagi); Ann. Mag. Nat. Hist., (6) XIII, p. 187, (*Cryptohypnus*) (1894) (Kônose, Nikkô, Hagi, Oyama, Yokohama, Miyanoshita, Sapporo and Hakodate).—MIWA, Mushi, VI, No. 2, p. 72, (1933) (Gifu).

Hab.—Hokkaidô: Sapporo 1-VIII, 1915 (S. MATSUMURA); Nopporo 26-VII, 1930 (S. UËNO). Honshiu: Oyama 24-V, 1880 (G. LEWIS). Shikoku: Sasayama in Iyo VII, 1911 (?).

Distr.—Japan.

Genus ZOROCHRUS C. G. THOMSON

Key to the Species

1. Elongate, ashy black and very opaque: densely and minutely sculptured on the upper surface; frontal carina projecting before the eyes; basal carina of pronotum short not much raised; antennae and legs black; $2\frac{1}{4}$ mm.....*cinefactus*
1′. Frontal carina not projecting before the eyes.....(2)
2. Narrow, aeneous black and rather opaque, with very short grey pubescence; pronotum with a median smooth line clearly visible behind the neck (but rarely wholly absent); antennae black; the tarsi long and dusky brown; $2\frac{1}{3}$ mm.....*agilis*
2′. Body entirely black.....(3)
3. Mat; pronotum rounded at sides, without any median line; antennae black, basal two joints brownish; legs yellow; $3\frac{1}{2}$ mm.....*insulsus*
3′. Pronotum with a median smooth line.....(4)
4. Brassy shining, with ashy pubescence; prothorax with the sides conspicuously widened in the middle, not scabrous but densely punctured on the pronotum; elytra with brassy greenish tint; antennae, with the basal joint piceous, others black; legs clear yellow; $3\frac{3}{4}$ mm.....*tutus*
4′. Body opaque; pronotum scabrous.....(5)
5. With whitish pubescence; pronotum densely scabrous; antennae pitchy black; legs clear yellow; $1\frac{1}{2}$-$1\frac{3}{4}$ mm.....*lewisi*
5′. With griseous pubescence; the median carina feeble; legs yellow, with the femora obscure; antennae black, except the second joint ferrugineous; 4 mm.....*curatus*

81. Zorochrus cinefactus LEWIS

Ann. Mag. Nat. Hist., (6) XIII, p. 188, (*Cryptohypnus*) (1894) (Nikkô).

Distr.—Japan (Honshiu).

82. Zorochrus agilis LEWIS (Pl. III, f. 14)

Ann. Mag. Nat. Hist., (6) XIII, p. 189, (*Cryptohypnus*) (1894) (Yokohama).

Hab.—Honshiu: Miyanoshita 24-V, 1880 (G. LEWIS).

Distr.—Japan (Honshiu).

83. Zorochrus insulsus CANDÈZE

Mém. Soc. Sc. Liége, (2) V, p. 13, (*Cryptohypnus*) (1873) (Japan).

Distr.—Japan (Kiushiu?).

84. Zorochrus tutus LEWIS

Ann. Mrg. Nat. Hist., (6) XIII, p. 184, (*Cryptohypnus*) (1894) (Fukushima).

=*curatus* (nec. CANDÈZE) MIWA, Monthl. Mag. Zool. Soc. Tôkyô, XLI, No. 492, p. 445, (*Hypnoidus*) (1929) (Saghalien).

Distr.—Japan (Honshiu) and Saghalien.

85. Zorochrus lewisi SCHWARZ (Pl. III, f. 15)

in WYTSMAN, Gen. Ins., XLVI, Elat. p. 316, (*Hypnoidus*) (1907) (nom. nov.)

=*atomarius* (non. CANDÈZE) LEWIS, Ann. Mag. Nat. Hist., (6) XIII, p. 187, (*Cryptohypnus*) (1894) (Torii-tôge).

=*ivanovi* JAKOBSON, Rev. Russe, XII, p. 136, (1912).

Hab.—Honshiu: Yagohara (Torii-tôge, 4016 feet alt.) between Shinano and Kôzuke 29-VII, 1881 (G. LEWIS).

Distr.—Japan (Honshiu).

86. Zorochrus curatus CANDÈZE (Pl. III, f. 16)

Mém. Soc. Sc. Liége, (2) V, p. 12, (*Cryptohypnus*) (1873) (Japan).—MIWA, Mushi, VI, No. 2, p. 72, (1933) (Minomo).

=*tutus* (non. LEWIS) MIWA, Trans. Nat. Hist. Soc. Formosa, XX, No, 106, p. 2, (1930) (Formosa).

Hab.—Honshiu: Ôtsu-Mayebara-Samegai 20-VII, 1881 (G. LEWIS). Shikoku: Kôyadahira in Awa 31-VII, 1913 (E. GALLOIS). Kiushiu: Kumamoto 24-IV, 1881 (G. LEWIS).

Distr.—Japan (Honshiu, Shikoku and Kiushiu) and Formosa.

Genus QUASIMUS GOZIS

Key to the Species

1. Elongate, black; elytra dark brown or wholly reddish brown; antennae black except the second and third joints flavescent; legs clear yellow; 2 mm...*luteipes*

1′. Body wholly black.....(2)
2. Glabrous, scarcely pubescent; very finely, evenly and sparsely punctulate; antennae pitchy black; legs testaceous 2½ mm.....*angustatus*
2′. Not glabrous, shining, with griseous pubescence; legs sometimes piceous.....(3)
3. Antennae robust; scutellum convex, strigose.....*carinicollis*
3′. Antennae moderate; scutellum circularly excavated and punctured .....(4)
4. Body three times longer than it is wide.....*minutissimus*
4′. Body length not over two and a half times as the width.....(5)
5. Body elliptical.....*ellipticus*
5′. Body oval.....*ovalis*

87. Quasimus luteipes CANDÈZE (Pl. III, f. 17)

Mém. Soc. Sc. Liége, (2) V, p. 15, (*Cryptohypnus*) (1873) (Japan).—MIWA, Trans. Nat. Hist. Soc. Formosa, XX, No. 105, p. 4, (1930) (Formosa).

Hab.—Nagasaki? III, 1881 (G. LEWIS).
Distr.—Japan (Kiushiu) and Formosa.

88. Quasimus angustatus MIWA (Pl. III, f. 18)

Ins. Mats., II, No. 2, p. 107, f. 3 ♂, (1927) (Sasayama).

Hab.—Shikoku: Sasayama in Iyo 21-VII, 1916 (S. MATSUMURA).
Distr.—Japan (Shikoku).

89. Quasimus carinicollis LEWIS (Pl. III, f. 19)

Ann. Mag. Nat. Hist., (6) XIII, p. 183, (*Cryptohypnus*) (1894) (Torii-tôge, Miyanoshita and Subashiri).—MIWA, Mushi, VI, No. 2, p. 70, (1933) (Yakushima).

Hab.—Honshiu: Miyanoshita 24-V, 1880 (G. LEWIS).
Distr.—Japan (Honshiu).

90. Quasimus minutissimus GERMAR (Pl. III, f. 20)

Fauna Ins. Eur., VI, nr. 8, (*Elater*) (1822) (Europe).—CANDÈZE, Mon., III, p. 87, (*Cryptohypnus*) (1860) (Europe); Mém. Soc. Sc. Liége, (2) V, p. 14, (*Cryptohypnus*) (1873) (Japan).—LEWIS, Ann. Mag. Nat. Hist., (6) XIII, p. 188, (*Cryptohypnus*) (1894) (Nagasaki, Seba, Hosokute and Nikkô).—REITTER, Fauna Germ., III, p. 234, (1911) (South Europe).—Kuhnt, Illustr. Best.-Tab. Käf. Deutschl. p. 628, (*Hypnoidus*) (1913) (North Germany).—MIWA, Mushi, VI. No. 2, p. 70, (1933) (Tomioka, Handakogen and Homansan).

Hab.—Honshiu: Hosokute in Shinano 22-VII, 1881 (G. LEWIS); Seba in Shinano 30-VII, 1881 (G. LEWIS). Shikoku: Iyo VIII, 1910 (S. ARAKAWA). Kiushiu: Nagasaki 27-III, 1881; 17-IV, 1881 (G. LEWIS).

Distr.—Europe, Caucasus, Asia-minor, Siberia and Japan (Honshiu, Shikoku and Kiushiu).

91. Quasimus ellipticus CANDÈZE (Pl. III, f. 21)

Mém. Soc. Sc. Liége, (2) V, p. 14, (*Cryptohypnus*) (1873) (Japan).
=*punctatus* MIWA, Ins. Mats., II, No. 2, p. 107, f. 2, ♂ (1927) (Tamba).

Hab.—Honshiu: Gifu 14-VII, 1924 (Y. MIWA); Kôbe 14-VII, 1881 (G. LEWIS). Shikoku: Kôyadahira in Awa 7-VIII, 1913 (G. GALLOIS). Kiushiu: Hitoyoshi 3-V, 1881 (G. LEWIS); Kirishima-Shinyu-Myoban 18-VII, 1933 (H. HORI) (Col. Ent. Mus., Kiushiu Imp. Univ.)
Distr.—Japan (Honshiu, Shikoku and Kiushiu) and Formosa.

92. Quasimus ovalis CANDÈZE (Pl. III, f. 22)

Mém. Soc. Sc. Liége, (2) V, p. 11, (*Cryptohypnus*) (1872) (Japan); Ann. Mus. Genova, (2) XIV. p. 493, (1894) (Sumatra).—MIWA, Trans. Nat. Hist. Soc. Formosa, XX, No. 106, p. 3, (1930) (Formosa); Mushi, VI, No. 2, p. 72, (1933) (Shimonoseki).

Hab.—Honshiu: Ômiya in Musashi 19-IV, 1914 (E. GALLOIS). Shikoku: Kôyadahira in Awa 7-VIII, 1913 (E. GALLOIS). Kiushiu: Goka 3-V, 1881 (G. LEWIS).
Distr.—Japan (Honshiu, Shikoku and Kiushiu), Formosa and Sumatra.

Subfamily ESTHESOPINAE FLEUTIAUX

Genus CARDIOPHORUS ESCHSCHOLTZ

Key to the Spesies

1. Scutellum conspicuously foveolate in anterior part.....(2)
1′. Scutellum slightly impressed but not foveolate in anterior part.....*vulgaris*
2. Elytral interstices very markedly rugose, giving an appearance of complete opacy .....*opacus*
2′. Elytra shining, interstices not rugose.....(3)
3. Pronotum elongate, with the sides rounded, finely but simply punctulate; 5 mm .....*lewisi*
3′. Pronotum oblong, with double punctations; 7 mm.....*subaeneus*

93. Cardiophorus vulgaris MOTSCHULSKY

SCHRENCK's Reisen Amurl., p. 111, t. 7, f. 21, (1860) (Siberia); Bull. Soc. Nat. Mosc., XXXIX, I, p. 165, (1866) (Japan).—CANDÈZE, Deutsche Ent. Zeitschr., XXIII, p. 281, (1879) (Amur).

=*pinguis* LEWIS, Ann. Mag. Nat. Hist., (6) XIII, p. 189, (1894) (Hakodate).—MATSUMURA, Thous. Ins. Japan, I, No. 3, p. 104, t. XLIX, f. 8, ♀ (1909); 6000 Illustr. Ins. Japan, p. 182, f. 400 ♀, (1931).

=*niponicus* LEWIS, Ann. Mag. Nat. Hist., (6) XIII, p. 189, (1894) (Nishimura).

Hab.—Hokkaidô: Sapporo 10–VIII, 1880 (G. LEWIS); 21–VI, 1926, VII, 1928, (Y. MIWA); Kotoni IX, 1928 (K. SATÔ); Aoyama VII, 1928 (Y. MIWA); Hakodate 25–VIII, 1880 (G. LEWIS); Mt. Daisetsu 8–VIII, 1926 (H. KÔNO). Honshiu: Gifu VII, 1914 (Y. MIWA); Nakano in Tôkyô 1–VII, 1904 (?).

Distr.—Japan (Hokkaidô and Honshiu) and East Siberia.

C. niponicus differs from *C. pinguis* by having a relatively longer third joint of antennae but this character is only a sexual difference of *C. pinguis*. The specimens of this species collected from Provinces Mino, Ise and Yamato, correspond to the description of *C. pinguis* rather than that of *niponicus*, although the type locality of the latter is Nishimura in Yamato. LEWIS determined the species collected from Hakodate as *C. vulgaris*, but afterwards he has described this species as *C. pinguis* without any reference to the latter. The Japanese species is usually considered to be synonymous with *C. vulgaris*.

94. Cardiophorus lewisi FLEUTIAUX

Bull. Mus. Nat. Hist. Paris, VIII, p. 20, (1902) (Central Japan).

Hab.—Ôshima island in Izu 1–VI, 1931 (K. KAMIYA)?

Distr.—Japan (Honshiu).

95. Cardiophorus subaeneus FLEUTIAUX

Bull. Mus. Nat. Hist., Paris, VIII, No. 1, p. 20, (1902) (Central Japan).

Distr.—Japan (Honshiu?).

96. Cardiophorus opacus LEWIS

Ann. Mag. Nat. Hist., (6) XIII, p. 190, (1894) (Subashiri).

Hab.—Kiushiu: Fukuoka 22–V, 1930 (H. HORI).

Distr.—Japan (Honshiu and Kiushiu).

Genus PARACARDIOPHORUS SCHWARZ

Key to the Species

1. Pronotum minutely punctulate among the larger punctures set in dense; body black with leady lustre.....*musculus*
1′. Pronotum densely but unevenly punctured.....(2)

2. Body with cinereous pubescence; legs black.....*pullatus*
2′. Body with griceous pubescence; legs red.....*sequens*

97. Paracardiophorus musculus ERICHSON (Pl. III, f. 29)

Zeitschr. Ent., II, p. 299 (*Cardiophorus*) (1840) (Europe).—CANDÈZE, Mon., III, p. 160, t. 3, f. 13, (*Cardiophorus*) (1860) (Europe).—SCHWARZ, Deutsche Ent. Zeitschr., p. 40, (1895); in WYTSMAN, Gen. Ins., 46, Elat. p. 172, (1906) (Japan).—REITTER, Fauna Germ., III, p. 233, (1911).—KUHNT, Illustr. Best.-Tab. Käf. Deutschl., p. 629, f. 57, d, (1913).—JAKOBSON, Žuki Rossiji, 1905–16, t. 13, f. 17, (1913).

Hab.—Hokkaidô: Hakodate VIII, 1880 (G. LEWIS).

Distr.—Middle and South Europe, Algeria, Caucasus, Siberia and Japan (Hokkaidô).

98. Paracardiophorus pullatus CANDÈZE (Pl. III, f. 27)

Mém. Soc. Sc. Liége, (2) V, p. 16, (*Cardiophorus*) (1873) (Japan).—HEYDEN, Deutsche Ent. Zeitschr., XXIII, p. 349, (*Cardiophorus*) (1879) (Hiogo); Horae Soc. Ent. Ross., p. 257, (*Cardiophorus*) (1887) (Corea).—SCHWARZ, Deutsch. Ent. Zeitschr., p. 40, (1895) (Japan).—FLEUTIAUX, Bull. Mus. Hist. Nat. Paris, VI, p. 356, (*Cardiophorus*) (1900) (Central Japan); ibid., p. 20, (1902).—YOKOYAMA et KANO, Monthl. Mag. Zool. Soc. Tôkyô, XXXVII, No. 459, p. 20, (1927) (Saghalien).—MIWA, Trans. Nat. Hist. Soc. Formosa, XIX, No. 103, p. 345, (1929) (Kuchinoerabu and Tanegashima); Mushi, VI, No. 2, p. 70, (*Cardiophorus*) (1933) (Sangunzan, Fukuoka and Sobosan).

Hab.—Hokkaidô: Sapporo 20–VIII, 1928 (K. SATÔ). Honshiu: Aomori 10–VII, 1928 (S. MATSUMURA); Tamagawa 3–X, 1921 (K. KAMIYA); Suzaka in Shinano 18–VI, 1932 (K. SATÔ); Yokohama VIII, 1927 (S. MINOWA); Miyanoshita 15–IV, 1880 (G. LEWIS); Mt. Ontake 34–VII, 1928 (H. FURUKAWA); Kôbe, 1871 (G. LEWIS); Onomichi 8–VIII, 1931 (K. ÔBAYASHI). Shikoku: Sasayama in Iyo VIII, 1911 (S. ARAKAWA). Kiushiu: Kagoshima 10–VII, 1908(?); Takachihonomine 17–VII, 1933 (H. HORI); Minamitane in Tanegashima 11–VII, 1928 (S. MINOWA); Kuchinoerabu-shima 17–VII, 1928 (S. MINOWA).

Distr.—Japan, Saghalien? and Corea.

99. Paracardiophorus sequens CANDÈZE (Pl. III, f. 28)

Mém. Soc. Sc. Liége, (2) V, p. 16, (*Cardiophorus*) (1873) (Japan).—SCHWARZ, Deutsche Ent. Zeitschr., p. 40, (1895).—MIWA, Mushi, VI, No. 2, p. 70, (*Cardiophorus*) (1933) (Tomioka and Fukuoka).

Hab.—Honshiu: Kiga 24–IV, 1880 (G. LEWIS); Gifu 5–V, 1914 (Y. MIWA); Seto

in Kii VIII, 1930 (M. TOKUNAGA); Kôbe 1871 (G. LEWIS). Shikoku: Takamatsu X, 1920 (Y. MIWA). Kiushiu: Beppu 1-VIII, 1916 (S. MATSUMURA); Kagoshima 10-VII, 1908(?).

Distr.—Japan (Honshiu and Kiushiu).

Genus PLATYNYCHUS MOTSCHULSKY

Key to the Species

1. Body bright reddish brown.....*ferrugineus*
1′. Body black.....(2)
2. Prothorax cylindrical.....*nothus*
2′. Prothorax not cylindrical.....(3)
3. Elytra longer than twice the size of head and prothorax combined; antennae and legs darker.....*pauper*
3′. Elytra shorter than twice the size of head and prothorax combined; antennae and legs clear brown.....*adjutor*

100. Platynychus ferrugineus LEWIS (Pl. III, f. 25)

Ann. Mag. Nat. Hist., (6) XIII, p. 191 (*Cardiophorus*) (1894) (Kagoshima .
=*sobrinus* (nec. CASTELNAU) CANDÈZE, Mém. Soc. Sc. Liége, (2) V, p. 17, *Cardiophorus*) (1873) (Japan).

Hab.—Kiushiu: Kumamoto 21-V, 1881 (G. LEWIS).

Distr.—Japan (Kiushiu).

CANDÈZE reported this species from Japan as *C. sobrinus* CAST., but LEWIS has given a new name according to the following differences.

1. Frontal carina transverse anteriorly, with a projection at the middle; antescutellar fovea large and deep.....*sobrinus*
1′. Frontal carina arched anteriorly; antescutellar fovea scarcely visible...*ferrugineus*

101. Platynychus nothus CANDÈZE

Elat. nouv., I, (Mém. Acad. Belg.) p. 43, (*Cardiophorus*) (1865) (Japan.—FLEUTIAUX, Wien. Ent. Zeit., XLVII, 2, p. 97, (*Cardiophorus*) (1930) (Formosa).

Hab.—Kiushiu: Hôman-san in Chikuzen 10-VI, 1930 (T. ESAKI)

Distr.—Japan (Kiushiu).

102. Platynychus pauper CANDÈZE (Pl. III, f. 23)

Mém. Soc. Sc. Liége, (2) V, p. 17, (*Cardiophorus*) (1873) (Japan).—HAROLD, Abhandl. Naturw. Ver. Bremen, IV, p. 293, (1875) (Japan).—MIWA, Mushi, VI.

No. 1, p. 28, (1933) (Kiushiu); ibid., No. 2, pp. 70 & 72 (Soboson and Ôyeyama).
=*rameus* LEWIS, Ent. Monthl. Mag., XVI, p. 156, (*Cardiophorus*) (1879) (Kawachi and Kii).—MIWA, Trans. Nat. Hist. Soc. Formosa, XIX, No. 103, p. 345, (1929) (Tanegashima).

Hab.—Hokkaido: Aoyama 10-VI, 1924 (Y. MIWA); Eniwa 15-VI, 1929 (H. KÔNO). Honshiu: Tsutayu in Tsugaru 14-VII, 1930 (K. KAMIYA); Yokohama 18-VII, 1927 (K. SATÔ); Iwamurata 27-V, 1932, Kashiwabara 29-V, 1932, Suzaka 18-VI, 1932 (K. SATÔ); Noguchi near Yokohama VI, 1880 (G. LEWIS); Miyanoshita V, 1880 (G. LEWIS); Wada in Kii (G. LEWIS) (4 specimens labelled *C. rameus*), Onomichi 8-VIII, 1931 (K. ÔBAYASHI). Shikoku: Mt. Tsurugi 18-VI, 1932 (K. ÔBAYASHI). Kiushiu: Obira 5-VIII, 1932 (T. SHIRAKI); Kagoshima 10-VII, 1908 (T. SHIRAKI); 27-V, 1929 (S. ISSIKI); Takachihonomine 17-VII, 1933 (H. HORI); Nishino-omote in Tanegashima 1929 (S. ISSIKI).

Distr.—Japan.

After carefully examining the type of each species, the author could not find any difference between them. *C. pauper* widely distributed in Japan and *rameus* is only a local modification of this.

103. Platynychus adjutor CANDÈZE (Pl. III, f. 24)

Mém. Soc. Sc. Liége, (2) V, p. 17, (*Cardiophorus*) (1873) (Japan).—Schwarz, Deutsche Ent. Zeitschr., p. 37, (*Paracardiophorus*) (1895).—FLEUTIAUX, Bull. Mus. Hist. Nat. Paris, VI, p. 356, (1900).—MIWA, Ins. Mats., II, No. 2, p. 108, (*Cardiophorus*) (1927) (Loo-Choo and Formosa); Trans. Nat. Hist. Soc. Formosa, XIX, No. 103, pp. 342 & 345, (*Cardiophorus*) (1929) (Ishigaki); ibid., XX, p. 8, (*Cardiophorus*) (1930) (Formosa); Mushi, VI, No. 1, p. 29, (1933) (Tsushima); ibid., No. 2, p. 70, (Fukuoka and Kashii).

Hab.—Honshiu: Yunoyama in Ise 10-VIII, 1920 (Y. MIWA); Nishimura in Yamato 20-VI, 1881 (G. LEWIS); Kôbe 14-VII, 1881 (G. LEWIS); Ichinotani at Suma 16-VI, 1930 (M. SUZUKI); Hanazono in Kyôto 24-V, 1926 (M. SUZUKI). Shikoku: Ochiai in Awa 16-VI, 1932 (K. ÔBAYASHI). Kiushiu: Obira 5-VIII, 1932 (T. SHIRAKI).

Distr.—Japan (Honshiu, Shikoku and Kiushiu), Loo-Choo, Corea and Formosa.

Subfamily MELANOTINAE SCHENKLING

Genus SPHENISCOSOMUS SCHWARZ

Key to the Species

1. Prothorax relatively longer; legs extremely black.....*restrictus*

1′. Legs usually reddish ..... *cete*

104. Spheniscosomus cete CANDÈZE (Pl. IV, f. 1)

Mon., III, p. 332, (*Melanotus*) (1860) (Japan).—SCHWARZ, Deutsche Ent. Zeitschr., p. 150, nota 1, (1891).—LEWIS, Ann. Mag. Nat. Hist., (6) XIII, p. 192, (*Melanotopsis*) (1894) (Nagasaki, Kôbe and Yokohama).—FLEUTIAUX, Bull. Mus. Hist. Nat. Paris, VI, p. 356, (1900) (Japan).—MIWA, Mushi, IV, No. 1, p. 28, (1933) (Kiushiu); ibid, No. 2, pp. 70 & 72, (Fukuoka, Kashii, Ibuki and Minomo).

var. **amussitatus** CANDÈZE (Pl. IV, f. 2)

Mém. Soc. Sc. Liége, (2) V, p. 19, (*Melanotus*) (1873) (Yokohama).—SCHWARZ, Wien. Ent. Zeit., XI, p. 132, (1892); Deutsche Ent. Zeitschr., p. 150, t. 2, f. 4, (1892).

Hab.—Honshiu: Awomori VII, 1928 (Y. MIWA); Amagi 10–VI, 1929 (S. KATÔ); Nasu 15–VII, 1930 (K. SATÔ); Gifu 10–VII, 1914 (Y. MIWA); Kanazawa VI, 1924 (S. TAKANO); Takasago VII, (S. MATSUMURA); Kôbe 10–VII, 1881 (G. LEWIS); Onomichi 8–VIII, 1932 (K. ÔBAYASHI). Shikoku: Kôyadahira in Awa VIII, 1913 (E. GALLOIS). Kiushiu: Nagasaki 25–V, 1881 (G. LEWIS); Kagoshima 10–VII, 1908(?); Takachihonomine 17–VII, 1933 (H. HORI).

Distr.—Japan (Honshiu and Kiushiu).

105. Spheniscosomus restrictus CANDÈZE (Pl. IV, f. 3)

Elat. nouv., I, (Mém. Acad. Belg.) p. 47, (*Melanotus*) (1865) (Japan); Mém. Soc. Sc. Liége, (2) V, p. 18, (*Melanotus*) (1873) (Japan).—HEYDEN, Deutsche Ent. Zeitschr., XXIII, p. 349, (*Melanotus*) (1879); Horae Soc. Ent. Ross., XXI, p. 256, (1887) (Corea).—SCHWARZ, Wien. Ent. Zeit., XI, p. 132, (1892); Deutsche Ent. Zeitschr., p. 150, t. 2, f. 3, (1892).—MIWA, Trans. Nat. Hist. Soc. Formosa, XX, No. 107, p. 60, (1930) (Formosa).

Hab.—Honshiu: Tôkyô 17–VI, 1913 (E. GALLOIS); Rendaiji 11–V, 1929 (S. KATÔ); Suma 20–V, 1930 (R. TAKAHASHI); Ichinotani 2–VIII, 1929 (M. SUZUKI); Onomichi 8–VIII, 1932 (K. ÔBAYASHI).

Distr.—Japan (Honshiu), Corea and Formosa.

Genus MELANOTUS ESCHSCHOLTZ

Key to the Species

1. Antennae with the third joint slightly longer than the second but nearly similar in the shape, the fourth longer than the preceding two joints combind .....(2)

1′. Antennae with the third joint longer than the second and nearly half as long as the second and fourth combind.....(7)
2. Body dark castaneous; front excavated.....*castanipes*
2′. Body black or the elytra castaneous only.....(3)
3. Elytra castaneous.....*seniculus*
3′. Elytra black.....(4)
4. Two apical abdominal segments reddish.....*erythropygus*
4′. Abdominal segments wholly black or slightly obscure red.....(5)
5. Body with greyish pubescence; antennae ferrugineous; legs clear brownish red; abdomen black or principally reddish; 7–8 mm.....*harmandi*
5′. Abdomen usually black.....(6)
6. Body fulvous pubescent; antennae brown; legs fuscous; pronotum not canaliculate.....*invectitius*
6′. Body griseous pubescent; antennae and legs dark red; pronotum canaliculate..... *caudex*
7. Body castaneous or fuscous.....(8)
7′. Body black.....(10)
8. Elytra three times longer than the prothorax.....*spernendus*
8′. Elytra three times less in length than the prothorax.....(9)
9. Prothorax widened in the middle and rounded anteriorly; prosternum with rather large, deep and ocellated punctures.....*lewisi*
9′. Prothorax neither widened nor rounded in the middle.....*legatus*
10. Elytra three times longer than the prothorax.....*issikii*
10′. Elytra three times less in length than the prothorax.....(11)
11. Legs black.....*piger*
11′. Legs reddish.....(12)
12. Pronotum convex, closely and coarsely punctured.....(13)
12′. Pronotum less convex, relatively wider at the base, rather sparsely and evenly punctured.....*correctus*
13. Body nearly four times longer than the width.....*annosus*
13′. Body three and half times less in length than width.....(14)
14. Pronotum opaque, thickly covered with ocellated punctures.....*ocellatopunctatus*
14′. Pronotum rather shiny, densely but not thickly punctured.....*senilis*

106. Melanotus castanipes PAYKULL (Pl. IV, f. 4)

Fauna Suec., III, p. 23, (*Elater*) (1800) (Europe).—CANDÈZE, Mon., III, p. 311, (*Elater*) (1860); Deutsche Ent. Zeitschr., XXIII, p. 281, (1879) (Amur).—MIWA, Ins. Mats., II, No. 2, p. 112, (1929) (Japan); Monthl. Mag. Zool. Soc. Tôkyô, p. 446, (1929) (Saghalien).

=*carinatus* MATSUMURA, Journ. Col. Agr., Tôhoku Imp. Univ., Sapporo, Japan, p. 121, (1911) (Saghalien).

Hab.—Hokkaidô: Teshio 9-VII, 1927, 3-VII, 1930 (S. MATSUMURA); Mt. Daisetsu 10-VIII, 1926 (H. KÔNO); Lake Dôya to Mt. Usu VII, 1923 (Y. MIWA); Sapporo 24-VII, 1928 (S. MATSUMURA); Mt. Eniwa 15-VI, 1928 (Y. MIWA). Honshiu: Lake Towada VII, 1927 (Y. MIWA); Hirayu in Hida 28-VIII, 1922 (M. SUZUKI).

Distr.—Europe, Caucasus, Asia-Minor, Siberia, Amur, Saghalien, Japan (Hokkaidô and Honshiu) and North America.

107. Melanotus seniculus CANDÈZE (Pl. IV, f. 14)

Mém. Soc. Sc. Liége, (2) V, p. 21, (1873) (Hiogo).—LEWIS, Ann. Mag. Nat. Hist., (6) XIII, p. 194, (1894) (Nagasaki and Yokohama).—MIWA, Mushi, VI, No. 1, p. 28, (1933) (Kiushiu); ibid., No. 2, p. 72, (Yamatogawa).

Hab.—Honshiu: Mukogaoka in Kanagawa 29-IV, 1929 (K. SATÔ); Lake Shôji at Fuji 2-VIII, 1922 (S. ARAKAWA); Arima in Settsu 17-V, 1928 (K. SATÔ). Shikoku: Matsuyama VIII, 1910 (S. ARAKAWA). Kiushiu: Nagasaki 12-IV, 1881 (G. LEWIS); Ôhita? (T. OTSUKA).

Distr.—Japan (Honshiu, Shikoku and Kiushiu).

var. **candezellus** MIWA, nom. nov.

seniculus var. a CANDÈZE, Mém. Soc. Sc. Liége, (2) V, p. 22 (1873).

Elytra paler, with the suture obscure.

108. Melanotus erythropygus CANDÈZE (Pl. IV, f. 11)

Mém. Soc. Sc. Liége, (2) V, p. 20, (1873) (Hiogo).—HEYDEN, Deutsche Ent. Zeitschr., XXIII, p. 349, (1879) (Hiogo).—SCHWARZ, Deutsche Ent. Zeitschr., p. 164, t. 2, f. 37, (1892).—MATSUMURA, Thous. Ins. Japan, I, No. 3, p. 107, Pl. XLIX, f. 13, (1906) (Japan); 6000 Illustr. Ins. Japan, p. 187, f. 432, (1831) (Japan and Formosa).—MIWA, Mushi, VI, No. 1, pp. 28 & 29, (1933) (Kiushiu); ibid., No. 2, p. 70, (Sangunzan and Hikosan).

Hab.—Hokkaidô: Sapporo 21-VI, 1928 (Y. MIWA). Honshiu: Misaki 21-VI, 1911 (S. MATSUMURA); Tôkyô VII, 1924 (Y. MIWA); Mt. Fuji 2-VIII, 1922 (S. ARAKAWA); Gifu 20-VI, 1914 (Y. MIWA); Hachijô-jima 15-V, 1909 (S. ARAKAWA). Shikoku: Tosa 1-VIII, 1916 (S. ARAKAWA). Kiushiu: Nagasaki 12-IV, 1881 (G. LEWIS); Tsushima 29-V, 1930 (T. ESAKI); Takachihonomine 17-VII, 1933 (H. HORI).

Distr.—Japan, Corea and Formosa?

109. Melanotus harmandi FLEUTIAUX

Bull. Mus. Hist. Nat. Paris, VIII, p. 21, (1902) (Central Japan).—YOKOYAMA, Coleoptera of Japan, I, p. 83, pl. 10, f. 5, (1930) (Houshiu).

Hab.—Honshiu: Akatsuka in Tôkyô 28-VI, 1928 (K. SATÔ); Arima 17-V, 1928 (K. SATÔ).

Distr.—Japan (Honshiu).

110. Melanotus invectitius CANDÈZE (Pl. IV, f. 12)

Elat. nouv., I, (Mém. Acad. Belg.) p. 47, (1864) (Japan).—LEWIS, Ann. Mag. Nat. Hist., (6) XIII, p. 139, (1894) (Miyanoshita, Kiga, Hakone and Kobe).

=*fortunei* CANDÈZE, Elat. nouv., II, p. 40, (1878) (Japan).

Hab.—Honshiu: Chiuzenji 26-IV, 1914 (E. GALLOIS); Rendaiji in Suruga 11-V, 1929 (S. KATÔ); Shimoda in Izu 17-V, 1929 (S. KATÔ); Miyanoshita V, 1880 (G. LEWIS). Shikoku: Iyo VIII, 1912, 3-VIII, 1915 (S. ARAKAWA). Kiushiu: Moji 18-VI, 1908 (S. MATSUMURA).

Distr.—Japan (Honshiu, Shikoku and Kiushiu).

111. Melanotus caudex LEWIS (Pl. IV, f. 13)

Ent. Monthl. Mag., XVI, p. 156, (1897) (Wakayama); Ann. Mag. Nat. Hist., (6) XIII, p. 193, (1894) (Kumamoto and Wakayama).

Hab.—Shikoku: Awa 10-VIII, 1913 (?). Kiushiu: Kumamoto 24-IV, 1881 (G. LEWIS).

Distr.—Japan (Honshiu and Kiushiu).

112. Melanotus spernendus CANDÈZE (Pl. IV, f. 7)

Mém. Soc. Sc. Liége, (2) V, p. 21, (1873) (Nagasaki).—LEWIS, Ann. Mag. Nat. Hist., (6) XIII, p. 192, (1894) (Nagasaki, Hitoyoshi and Yuyama).—MIWA, Trans. Nat. Hist. Soc. Formosa, XIX, No. 103, p. 346, (1929) (Yakushima); Mushi, VI, No. 1, pp. 28 & 29, (1933) (Kiushiu).

Hab.—Honshiu: Sendai V, (Y. MIWA); River Katsura near Kyôto 12-VIII, 1922 (M. SUZUKI); Tanigumi in Mino 21-V, 1906 (?). Shikoku: Mt. Tsurugi in Awa 18-VI, 1932 (K. ÔBAYASHI). Kiushiu: Hitoyoshi 3~17-V, 1881 (G. LEWIS); Kagoshima 10-VII, 1903 (?); Takachihonomine 17-VII, 1933 (H. HORI); Yakushima 30-IV, 1929 (S. ISSIKI).

Distr.—Japan (Honshiu, Shikoku and Kiushiu).

113. Melanotus issikii MIWA (Pl. VII, f. 25)

Trans. Nat. Hist. Soc. Formosa, XIX, No. 103, p. 346, (1929) (Yakushima).

Hab.—Kiushiu: Yakushima 30-IV, 1929 (S. ISSIKI).

Distr.—Japan (Kiushiu).

114. Melanotus lewisi SCHENKLING (Pl. IV, f. 4)

in Junk's Col. Cat., 88, Elat. II, p. 277, (1927) (nom. nov.).

=*longipennis* (nec. KÜST, 1848) LEWIS, Ann. Mag, Nat. Hist., (6) XIII, p. 192, (1894) (Kôbe and Kyôto).

Hab.—Honshiu: Hirayu in Hida 21-VIII, 1922 (M. SUZUKI); Toba in Ise 1-VIII, 1914 (Y. MIWA); Wakayama 28-VII, 1930 (S. SAKAGUCHI). Shikoku: Kôyadahira in Awa 9-VIII, 1913 (E. GALLOIS). Kiushiu: Moji VII, 1930 (Y. MIWA).

Distr.—Japan (Honshiu, Shikoku and Kiushiu).

115. Melanotus legatus CANDÈZE (Pl. IV, f. 5)

Mon., III, p. 323, (1860); Mém. Soc. Sc. Liége, (2) V, p. 21, (1873) (Nagasaki). —HEYDEN, Deutsche Ent. Zeitschr., XXIII, p. 349, (1879) (Kyôto and Mino).—SCHWARZ, ibid., XXXVI, p. 164, t. 2, f. 30, (1892).—MIWA, Ins. Mats., II, No. 2, p. 112, (1927) (Kuriles, Loo-Choo, Formosa and Corea); Monthl. Mag. Zool. Soc. Tôkyô, XLI, No. 492, p. 446, (1929) (Kuriles: Kunashiri); Trans. Nat. Hist. Soc. Formosa, XIX, No. 103, p. 347, (1929) (Tanegashima); Mushi, VI, No. 1, pp. 28 & 29, (1933) (Sangunzan, Inunakiyama and Tsushima); ibid., No. 2, pp. 70 & 72, (Tomioka, Fukuoka, Sobosan, Wakasugiyama and Minomo).

=*laticollis* MOTSCHULSKY, Etud. Ent., IX, pl. 9, (1860) (Japan).—HEYDEN, Deutsche Ent. Zeitschr., XXII, p. 349, (1897): teste.

=*annosus* (non CANDÈZE) OKAMOTO, Bull. Agr. Ex. St., I, No. 2, p. 182, (1924) (Corea: Saishûtô).

Hab.—Hokkaidô: Sapporo 25-VI, 1924, 2-VII, 1929, 26-V, 1930, (H. KÔNO); Mt. Acan VII, 1928 (H. KÔNO). Honshiu: Towada VII, 1927 (Y. MIWA); Yokohama 28-VI, 1928 (S. MINOWA); Mt. Takao 29-VIII, 1927 (K. KAMIYA); Atami 1-VII, 1904 (?); Shizuoka 3-VI, 1929 (C. WATANABE); Amagi 10-VI, 1929 (S. KATÔ); Shibata in Echigo VII, (S. MATSUMURA). Shikoku: Kôyadahira in Awa 27-VII, 1913 (E. GALLOIS); Mibuchi 12-VII, 1932 (K. ÔBAYASHI). Kiushiu: Nagasaki IV, 1881 (G. LEWIS); Kagoshima 27-IV, 1929 (S. ISSIKI); Nishino-omote in Tanegashima 1-V, 1929 (S. ISSIKI); Tsushima 26-V, 1930 (T. ESAKI).

Distr.—Kuriles, Japan, Corea, China and Loo-Choo (see fauna of Loo-Choo).

This species has been reported from Loo-Choo and Formosa in 1927, but this was an error for the determination. The species from Loo-Choo was new and described as *M. loochooensis* by the author in 1929. The other from Formosa is a minor form of *M. regalis* CAND.

116. Melanotus correctus CANDÈZE (Pl. IV, f. 9)

Elat. nouv., I, (Mém. Soc. Acad. Belg.) p. 48, (1864) (Japan).—SCHWARZ,

Deutsche Ent. Zeitschr., p. 156, t. 2, f. 33, pl. 64, (1892).—MIWA, Mushi, VI, No. 1, p. 28, (1933) (Handa-kôgen); ibid., No. 2, p. 72, (Sangunzan).

Hab.—Honshiu: Nasu 15-VII, 1930 (K. SATÔ); Pref. Tochigi 4-VI, 1921 (S. ARAKAWA); Mt. Takao near Tôkyô 20-V, 1917, (E. GALLOIS); 18-VII, 1927 (K. SATÔ); Hakone 15-VI, 1930 (K. KAMIYA): Kurikara-tôgo and Kanazawa VI, 1924 (S. TAKANO); Sakai 27-VII, 1931 (M. KODERA).

Distr.—Japan (Honshiu).

117. Melanotus annosus CANDÈZE (Pl. IV, f. 8)

Elat. nouv., I, (Mém. Soc. Acad. Belg.) p. 48, (1894) (Japan).—HAROLD, Abhandl. Nat. Ver. Bremen, p. 130, (1876) (Hiogo).—SCHWARZ, Deutsche Ent. Zeitschr., p. 156, t. 2, f. 33, pl. 64, (1892).—LEWIS, Ann. Mag. Nat. Hist., (6) XIII, p. 193, (1894) (Nagasaki).—MIWA, Mushi, VI, No. 1, p. 28, (1933) (Kiushiu); ibid., No. 2, pp. 70 & 72, (Tachibanayama, Fukuoka and Hanazono); Trans. Nat. Hist. Soc. Formosa, XXIII, No. 125, p. 158. (1933) (Corea).

Hab.—Honshiu: Nasu 15-VII, 1881 (G. LEWIS); Kanazawa VI, 1924 (S. TAKANO). Sikoku: Sugeoi 13-VI, 1932 (K. ÔBAYASHI). Kiushiu: Nagasaki IV, 1881 (G. LEWIS); Kagoshima 10-VII, 1908 (?); Takachihonomine 17-VII, 1933 (H. HORI).

Distr.—Japan (Honshiu, Shikoku and Kiushiu), Corea and Loo-Choo (Ôshima).

118. Melanotus ocellatopunctatus LEWIS

Ann. Mag. Nat. Hist., (6) XIII, p. 193, (1894) (Junsai).

Distr.—Japan (Hokkaidô).

119. Melanotus senilis CANDÈZE (Pl. IV, f. 10)

Elat. nouv., I, (Mém. Soc. Acad. Belg.) p. 47, (1864) (Japan).—SCHWARZ, Deutsche Ent. Zeitschr., p. 164, t. 2. f. 35, (1892).—LEWIS, Ann. Mag. Nat. Hist., (6) XIII, p. 193, (1894) (Kôbe).—MIWA, Trans. Nat. Hist. Soc. Formosa, XIX, No. 103, p. 346, (1929) (Yakushima); ibid., XXI, No. 116, p. 260, (1931) (Ôshima); Mushi, VI, No. 1, p. 28, (1933) (Kiushiu).

Hab.—Hakkaidô: Sapporo VI, 1925 (Y. MIWA); Lake Dôya to Mt. Usu VII, 1928 (Y. MIWA). Honshiu: Amagi 10-VI, 1929 (S. KATÔ); Wakayama V, 1930 (S. SAKAGUCHI); Ichinotani at Suma 2-VII, 1930 (M. SUZUKI); Kôbe VII, 1881 (G. LEWIS). Shikoku: Nishiomura in Awa 18-VI, 1932 (K. ÔBAYASHI). Kiushiu: Yakushima 30-IV, 1929 (S. ISSIKI); Kagoshima 10-VII, 1908 (?).

Distr.—Japan and Loo-Choo (Ôshima).

120. Melanotus piger MOTSCHULSKY

Etud. Ent., p. 45, (*Cratonychus*) (1853) (Pekin); ibid., p. 9, (1860) (Japan).—HEYDEN, Deutsche Ent. Zeitschr., p. 349, (1879) (Hiogo); Horae Soc. Ent. Ross., XXI, p. 257, (1887) (Corea).

Distr.—Japan (Honshiu), Corea and China (Pekin).

The Japanese species seems to be *Spheniscosomus restrictus* CAND., but the type is yet unknown to the author.

Subfamily ATHOINAE C. SCHAUFUSS

Genus LIMONIUS ESCHSCHOLTZ

Key to the Species

1. Body reddish brown.....(2)
1′. Body not reddish brown.....(3)
2. Frontal carina feebly arched, with two depressions behind it; pronotum with a feeble median canaliculation; scutellum with a fine smooth carina; epipleura, abdomen, hind angles of pronotum, legs and antennae paler than the general colour of the body; 10 mm.....*brunneus*
2′. Frontal carina feebly emarginate, without depression on the head; pronotum without canaliculation; head and thorax darker coloured; hind angles with a narrow margin behind the neck red; antennae with the three basal joints red, others dusky or sometimes all joints are marked with black; epipleurae and legs reddish brown; 7½–8 mm.....*marginicollis*
3. Black, with greyish pubescence; elytra bright red; antennae black, the second and third joints short and equal in length; legs black, knees and claws pale; 7 mm.....*rufipennis*
3′. Elytra not bright red.....(4)
4. Scutellum with more or less distinct carina.....(5)
4′. Scutellum without carina.....(11)
5. Bronzy shining; elytra with testaceous stripes or markings.....(6)
5′. Elytra unicolour.....(7)
6. Antennae rather dilated; the punctation of pronotum very dense; elytra striped only at the basal part; 10 mm.....*vittatus*
6′. Antennae moderately dilated from the third joint; the punctation of pronotum rather fine and close, but not dense; elytra striped entirely on interstices of the fifth, sixth and seventh striae; 7½ mm.....*imitans*
7. Black and rather opaque, with greyish pubescence; antennae black, the second and third joints short and equal; legs black, 8½ mm.....*atricolor*

7′. Boy not black.....(8)
8. Obscure aeneous, shining, with greyish pubescence; the frontal carina of the head feebly emarginate; hind angles of pronotum narrowly red; legs clear red; 6½ mm.....*approximans*
8′. Not aeneous; legs not reddish.....(9)
9. Purple-black; head and thorax golden red, with firely reddish tint; head feebly emarginate at the frontal carina and impressed between the eyes; pronotum faintly canaliculate; legs pilose, black; 6¾ mm.....*ignicollis*
9′. Dark bronze; head and thorax golden green; frontal carina well marked, with the edge feebly sinuous; forehead triangularly impressed between the eyes; elytra with a metallic purple tint; legs with the tibiae and tarsi infuscate, the femora obcurely brown; 6½ mm.....*eximius*
10. Aeneous, shining, with greyish pubescence; the frontal carina not prominent; elytra with the outer margin reddish; antennae black, the third joint visibly longer than the second; legs black, the tibiae and claws reddish; 8–9 mm.....*marginipennis*
10′. Obscure aeneous; elytra without reddish margin.....(12)
11. Body with yellowish tawny pubescence; head convex, with the frontal carina bent and well raised; antennae black, the second and third joints nearly alike and relatively shorter than those of *L. niponensis;* legs slender, the femora infuscate, the tibiae and tarsi paler; 9 mm.....*montivagus*
11′. Body with greyish pubescence; head slightly depressed between the antennae, with the frontal carina straight anteriorly; antennae black, the second and thirds joints equal in length; legs black, the knees and claws pale, the tibiae stouter than those of *L. montivagus;* 12 mm.....*niponensis*

121. Limonius approximans LEWIS (Pl. VII, f. 27)

Ann. Mag. Nat. Hist., (6) XIII, p. 193, (1894) (Nikkô).

Hab.—Mt. Daisen in Hôki 13-VIII, 1918 (K. TAKEUCHI).

Distr.—Japan (Honshiu).

122. Limonius ignicollis LEWIS (Pl. IV, f. 18)

Ann. Mag. Nat. Hist., (6) XIII, p. 197, (1894) (Nikkô).

Hab.—Hokkaidô: Nopporo 10-VII, 1928 (Y. MIWA).

Distr.—Japan (Hokkaidô and Honshiu).

123. Limonius eximius LEWIS (Pl. IV, f. 19)

Ann. Mag. Nat Hist., (6) XIII, p. 318, (1894) (Honshiu).—Miwa, Mushi, VI, No. 2, p. 72, (1933) (Minomo).

=*purpureipennis* MIWA, Ins. Mats., II, No. 1, p. 20, pl. 1, f. 15, (*Megapenthes*) (1927) (Tôkyô).

Hab.—Honshiu: Mt. Takao in Musashi 20-V, 1917 (E. GALLOIS).

Distr.—Japan (Honshiu).

124. Limonius atricolor LEWIS (Pl. IV, f. 20)

Ann. Mag. Nat. Hist., (6) XIII, p. 197, (1894) (Wakayama and Miyanoshita). MIWA, Mushi, VI, No. 1, p. 28, (1933) (Kiushiu); ibid., No. 2, p. 72, (Hanazono and Gifu).

Hab.—Honshiu: Mt. Takao 6-V, 1912 (H. TAKABAYASHI); Gifu 22-VI, 1924 (M. YANAGIHARA); Wakayama VIII, 1929 (S. SAKAGUCHI). Shikoku: Mt. Tsurugi in Awa 18-VI, 1932 (K. ÔBAYASHI).

Distr.—Japan (Honshiu, Shikoku and Kiushiu).

125. Limonius vittatus CANDÈZE (Pl. IV, f. 23)

Mém. Soc. Sc. Liége, (2) V, p. 22, (1873) (Higo and Hongkong?).—MIWA, Mushi, VI, No. 2, p. 72, (1933) (Minomo and Kibune).

Hab.—Hokkaidô: Sapporo 3-VII, 1928 (Y. OHTA). Honshiu: Mt. Kibune 27-VII, 1919 (M. SUZUKI).

Distr.—Japan (Hokkaidô and Honshiu) and China (Hongkong).

126. Limonius imitans LEWIS (Pl. IV, f. 22)

Ann. Mag. Nat. Hist., (6) XIII, p. 196, (1893) (Miyanoshita).

=*flavolineatus* MIWA, Ins. Mats., II, No. 1, p. 19, pl. I, f. 14, (*Megapenthes*) (1927) (Nikkô and Pref. Iwate).

Hab.—Honshiu: Miyanoshita V, 1880 (G. LEWIS); Minobu 18-IV, 1918 (K. TAKEUCHI).

Distr.—Japan (Honshiu).

This species seems to be synonymous with *L. vittatus* CAND., and it may not usually be considered otherwise than the colour variation of the latter.

127. Limonius rufipennis LEWIS (Pl. IV, f. 21)

Ann. Mag. Nat. Hist., (6) XIII, p. 196, (1894) (Hitoyoshi and Ogumayama).

Hab.—Snikoku: Mibuchi 13-VII, 1932 (K. ÔBAYASHI). Kiushiu: Hitoyoshi 15-V, 1881 (G. LEWIS).

Distr.—Japan (Sikoku and Kiushiu).

128. Limonius brunneus LEWIS

Ann. Mag. Nat. Hist., (6) XIII, p. 195, (1894) (Nikkô).

Distr.—Japan. (Honshiu).

129. Limonius montivagus LEWIS

Ann. Mag. Nat. Hist., (6) XIII, p. 194, (1894) (Nikkô).

Distr.—Japan (Honshiu).

130. Limonius niponensis LEWIS (Pl. IV, f. 15)

Ann. Mag. Nat. Hist., (6) XIII, p. 194, (1894) (Junsai).

Hab.—Hokkaidô: Nopporo 10-VI, 1928 (Y. MIWA); Sapporo VI, 1927 (Y. MIWA).

Distr.—Japan (Hokkaidô).

131. Limonius marginipennis LEWIS (Pl. IV, f. 16)

Ann. Mag. Nat. Hist., (6) XIII, p. 195, (1894) (Nikkô).

Hab.—Honshiu: Nikkô 10-VIII, 1881 (G. LEWIS); Chiuzenji 10-IX, 1926 (Y. MIWA).

Distr.—Japan (Honshiu).

132. Limonius marginicollis LEWIS (Pl. IV, f. 17)

Ann. Mag. Nat. Hist., (6) XIII, p. 196, (1894) (Oyayama, Nikkô, Miyanoshita and Kashiwagi).

Hab.—Honshiu: Nikkô VI, 1880 (G. LEWIS); Miyanoshita 11-V, 1880 (G. LEWIS).

Distr.—Japan (Honshiu).

Genus PHELETES KIESENWETTER

Key to the Species

1. Body dull yellowish, with an aeneous lustre; head and pronotal disk infuscate ..... *montanus*

1'. Body aeneous black; legs dusky red ..... *aenescens*

133. Pheletes montanus MIWA (Pl. V, f. 1)

Ins. Mats., III, No. 2, p. 41, pl. I, f. 6, (*Pittonotus*) (1928) (Mt. Tsubakura).

Hab.—Honshiu: Mt. Tsubakura in Shinano 27-VII, 1924 (H. KÔNO).

Distr.—Japan (Honshiu).

134. Pheletes aenescens MIWA (Pl. V, f. 2)

Ins. Mats., III, No. 2, p. 42, pl. I, f, 7, (*Pittonotus*) (1928) (Chiuzenji and Saghalien).

Hab.—Hokkaidô: Toikambetsu in Teshio 3-VII, 1930 (H. KATÔ).

Distr.—Saghalien and Japan (Hokkaidô and Honshiu).

Genus HARMINIUS FAIRMAIRE

Subgenus HARMINIUS s. str.

135. Harminius singularis LEWIS (Pl. IV, f. 24)

Ann. Mag. Nat. Hist., (6) XIII, p. 201, (*Athous*) (1894) (Junsai).—SCHWARZ in Wytsman, Gen. Ins., 46, Elat. p. 191, (*Diacanthous*) (1906).—YOKOYAMA & KANO, Monthl, Mag. Zool. Soc. Tôkyô, XXXIX, No. 459, p. 20, (1927) (Saghalien).—MIWA, ibid., XLI, No. 492, p. 447 (1929).

=*galloisi* MIWA, Ins. Mats., II, No. 3, p. 134, pl. V, f. 1, (1928) (Chiuzenji and Towada).

var. **chishimana** MIWA, Ins. Mats., II, No. 3, p. 134, pl. V, f. 2, (1928) (Kunashiri).

ab. **nikkoensis** MIWA, Ins. Mats., II, No. 3, p. 134, pl. V, f. 3, (1928) (Chiuzenji).

Hab.—Hokkaidô: Junsai 28-VII, 1880 (G. LEWIS). Honshiu: Lake Towada VII, 1927 (Y. MIWA); Chiuzenji 10-VIII, 1915 (E. GALLOIS).

Distr.—Saghalien? Kuriles and Japan (Hokkaidô and Honshiu).

Subgenus DIACANTHOUS REITTER

Key to the Species

1. Prothorax relatively shorter and narrower, with the sides sinuate; elytra bright in colour, with the zigzag fasciae rather obscure.....*ainu*
1′. Not so.....*undosus*

136. Harminius (Diacanthous) undosus LEWIS (Pl. IV, f. 25)

Ann. Mag. Nat. Hist., (6) XIII, p. 256, (*Athous*) (1894) (Mt. Niohôzan at Nikkô).—MIWA, Ins. Mats., II, No. 3, p. 135, (1928) (Saghalien, Hokkaidô and Honsihu); Monthl. Mag. Zool. Soc. Tôkyô, XLI, No. 492, p. 447, (1929).

Hab.—Hokkaidô: Mt. Daisetsu VII, 1930 (H. KÔNO).

Distr.—Saghalien and Japan (Hokkaidô and Honshiu).

137. Harminius (Diacanthous) ainu MIWA (Pl. IV, f. 26)

Ins. Mats., II, No. 3, p. 135, pl. V, f. 4, (1928) (Mt. Tokachi).

Hab.—Hokkaidô: Mt. Akan-take VII, 1928 (H. KÔNO).

Distr.—Japan (Hokkaidô).

Genus ATHOUS ESCHSCHOLTZ

Subgenus STENAGOSTUS C. G. THOMSON

138. Athous (Stenagostus) umbratilis LEWIS (Pl. V, f. 3)

Ann. Mag. Nat. Hist., (6) XIII, p. 198 (1894) (Junsai, Chiuzenji and Oyayama). —YUASA, in Icon. Ins. Jap. (Nippon Konchiu Zukan), p. 648, f. 1269, (1932).—MIWA, Mushi, VI, No. 1, p. 30, (1933) (Sapporo); ibid., No. 2, pp, 70 & 73, (Sobosan and Usui-tôge).

Hab.—Hokkaidô: Maruyama at Sapporo 24-VII, 1928 (Y. MIWA). Honshiu: Lake Towada 22-VII, 1927 (Y. MIWA); Chiuzenji 1-VIII, 1916 (E. GALLOIS). Shikoku: Kôyadahira in Awa 7-VIII, 1913 (C. GALLOIS). Kiushiu: Moji 7-VII, 1930 (Y. MIWA).

Distr.—Japan.

Subgenus ATHOUS s. str.

Key to the Species

1. Scutellum not carinate.....(2)
1′. Scutellum more or less carinate.....(4)
2. Prothorax fuscous or blackish except the margin and hind angels; elytra castaneous; 9–10 mm.....*porrecticollis*
2′. Body wholly castaneous.....(3)
3. Body more opaque; prothorax less narrowed anteriorly; antennae longer and more slender; 12 mm.....*comes*
3′. Not so; 12 mm.....*suturalis*
4. Body black, with a cyanic lustre; scutellum conspicuously elevated in the middle and makes like two sides of a prism.....*praenobilis*
4′. Body without cyanic lustre; scutellum carinate but not elevated like a prism.....(5)
5. Prothorax not sinuate before the hind angles; legs black or rarely reddish.....*secessus*
5′. Prothorax strongly sinuate before the hind angles; legs pale red or rarely infuscate.....(6)
6. Elytra black or fuscous.....*sinuatus*
6′. Elytra pale brownish yellow.....*harmandi*

139. Athous praenobilis LEWIS (Pl. V, f. 4)

Ann. Mag. Nat. Hist., (6) XVI, p. 407, (1895) (Chiuzenji, Oyama, Oyayama and Junsai).—MATSUMURA, Thous. Ins. Japan, III, p. 105, pl. XLIX, f. 9,

(*Corymbites*) (1906); 6000 Illustr. Ins. Japan, p. 181, f. 396, (1931).—MIWA, Mushi, VI, No. 1, pp. 28 & 30, (1933) (Ichibusayama, Sobosan and Kamiotoineppu); ibid., No. 2, p. 73, (Kiso).

=*subcyaneus* (nec. MOTSCH., 1836) LEWIS, Ann. Mag. Nat. Hist., (6) XIII, p. 199, (1894) (Chiuzenji, Oyama and Junsai).

Hab.—Hokkaidô: Sapporo VII, 1928 (Y. MIWA). Honshiu: Chiuzenji VII, 1880 (G. LEWIS); Agematsu in Shinano 14-VII, 1930 (M. CHÛJÔ). Shikoku: Kôyadahira in Awa 3-VIII, 1913 (E. GALLOIS).

Distr.—Japan.

140. Athous secessus CANDÈZE (Pl. V, f. 5)

Mém. Soc. Sc. Liége, (2) V, p. 23, (1873) (Hiogo).—LEWIS, Ann. Mag. Nat. Hist., (6) XIII, p. 199, (1894) (Kyôto, Ôsaka and Nikkô).—FLEUTIAUX, Bull. Mus. Hist. Nat. Paris, VI, p. 357, (1900).—REITTER, Best.-Tab. Col., 56, p. 37, nota 1, (1905).—MIWA, Mushi, VI, No. 1, p. 28, (1933) (Kiushiu); idid., No. 2, pp. 70 & 73, (Kujusan, Inunaki-tôge, Fukuoka, Yumoto, Akakura, Kamikôchi, Daisen, Nikkô and Asibe).

Hab.—Honshiu: Gumma Pref. 10-VII, 1913 (S. MATSUMURA); Gifu 5-VII, 1924 (Y. MIWA); Kôbe 16-VII, 1881 (G. LEWIS); Ichinotani at Suma 2-VIII, 1929 (M. SUZUKI). Hanazono near Kyôto 24-V, 1926 (M. SUZUKI).

Distr.—Japan (Honshiu, Shikoku and Kiushiu).

141. Athous sinuatus LEWIS (Pl. V, f. 6)

Ann. Mag. Nat. Hist., (6) XIII, p. 199, (1894) (Wada-tôge, Fukushima, Yumoto, Nishimura and Nowata).—REITTER, Best.-Tab., 56, p. 37, nota 1, (1905).

Hab.—Honshiu: Lake Towada VII, 1927 (Y. MIWA); Nasu 15-VII, 1930 (K. SATÔ); Nikkô VI, 1880 (G. LEWIS); Oiwake 3510 ft. in Shinano 3-VIII, 1881 (G. LEWIS); Chiuzenji 23-VIII, 1881 (G. LEWIS); Mt. Ibuki VII, (M. YANAGIHARA); Kamikôchi 10-VIII, 1930 (T. SHIRAKI); Mt. Ôdaigahara 12-VIII, 1913 (S. ISSIKI); Mt. Sanjôdake 9-VIII, 1913 (S. ISSIKI); Ôshima in Izu 1-VI, 1931 (K. KAMIYA). Shikoku: Kôyadahira in Awa 7-VIII 1913 (E. GALLOIS); Iyo 5-IV, 1915 (S. ARAKAWA).

Distr.—Japan (Honshiu and Shikoku).

142. Athous harmandi FLEUTIAUX

Bull. Mus. Hist. Nat. Paris, VIII, p. 21, (1902) (Japan).

Distr.—Japan (Honshiu?).

This seems to be a variety of the preceding species as FLEUXTIAU stated in the "Bull. Mus. Hist. Nat. Paris, VII, p. 357, 1900," but the type is unknown to the author.

143. Athous suturalis CANDÈZE (Pl. V, f. 7)

Mém. Soc. Sc. Liége, (2) V, p. 3, (1873) (Hiogo).—LEWIS, Ann. Mag. Nat. Hist., (6) XIII, p, 200, (1894) (Kôbe, Fukushima and Fukui).—MIWA, Mushi, VI, No. 2, p. 71, (1933) (Hikosan).

Hab.—Honshiu: Fukushima 26-VII, 1881 (G. LEWIS); Chiuzenji 17-VIII, 1915 (E. GALLOIS).

Distr.—Japan (Honshiu).

144. Athous comes LEWIS

Ann. Mag. Nat. Hist., (6) XIII, p. 200, (1894) (Sapporo).—FLEUTIAUX, Bull. Mus. Hist. Nat. Paris, VIII, p. 22, (1902) (Central Japan).

Hab.—Hokkaidô: Junsai 13-VII, 1880 (G. LEWIS).

Distr.—Japan (Hokkaidô).

145. Athous porrecticollis LEWIS (Pl. V, f. 8)

Ann. Mag. Nat. Hist., (6) XVI, p. 201, (1894) (Junsai).

=*daisetsusanus* MIWA, Ins. Mats., II, No. 3, p. 136, pl. V, f. 5, (1928) (Mt. Daisetsu, Sapporo and Lake Towada).

Hab.—Hokkaidô: Zenibako 24-VII, 1928 (Y. MIWA); Mt. Daisetsu 10-VIII, 1926 (H. KÔNO); Mt. Acan VII, 1928 (H. KÔNO); Toikambetsu 14-VII, 1930 (T. SHIRAKI); Junsai 13-VII, 1880 (G. LEWIS).

Distr.—Japan (Hokkaidô and Honshiu).

Subgenus HETERATHOUS REITTER

Key to the Species

1. Prothorax wholly black.....(2)
1′. Prothorax not wholly black.....(4)
2. Pronotum spherically convex, with the sides arched at the middle .....*isshikii*
2′. Prothorax elongate, with the sides not arched .....(3)
3. Elyta black with a cyanic lustre.....*virens*
3′. Elytra brownish yellow.....var. *brunneipennis*
4. Pronotum wholly bright reddish.....(5)
4′. Pronotum reddish at the posterior corner..... .....*desertor*
5. Elytra black with a cyanic lustre.....*sanguinicollis*
5′. Elytra dull brown.....var. *flavipennis*

146. Athous (Heterathous) virens CANDÈZE (Pl. V, f. 10)

Mém, Soc. Sc. Liége, (2) V, p. 24, (1873) (Hiogo).—LEWIS, Ann. Mag. Nat. Hist., (6) XIII, p. 200, (1894) (Wada-tôge, Chiuzenji, Mayasan and Shimonosuwa).—MIWA, Mushi, VI, No. 2; p. 71, (1933) (Hikosan and Handakôgen).

=*subcyaneus* MOTSCHULSKY (absque charact), Bull. Soc. Nat. Mosc., XXXIX, I, p. 166, (1866) (Japan) (teste: G. LEWIS).—HAROLD, Deutsche Ent. Zeitschr., XXII, p. 73, (1878) (Tôkyô).—FRIVALDSZKY, Term. Füzetek., XV, p. 124, (1892) (Japan).

Hab.—Honshiu: Chiuzenji 14–VIII, 1881 (G. LEWIS); Wada-tôge 1–VIII, 1881, (G. LEWIS); Hakone 28–VII, 1930 (T. ADACHI); Kyôto VII, (M. SUZUKI); Mt. Daisen in Hôki 23–VII, 1932 (K. ÔBAYASHI). Shikoku: Kôyadahira in Awa 5–VIII, 1913 (E. GALLOIS). Kiushiu: Nagasaki VII, 1913 (S. MATSUMURA); Kagoshima VIII, 1903 (S. MATSUMURA); Takachihonomine 17–VII, 1933 (H. HORI).

var. **brunneipennis** LEWIS, Ann. Mag. Nat. Hist., (6) XIII, p. 200, (1894).—MIWA, Mushi, VI, No. 2, p. 71, (1933) (Sobosan).

Hab.—Honshiu: Wada-tôge 1–VIII, 1881 (G. LEWIS); Mt. Norikura in Hida 27–VII, 1930 (K. KAMIYA). Shikoku: Kôyadahira in Awa 9–VIII, 1914 (E. GALLOIS).

Distr.—Japan (Honshiu, Shikoku and Kiushiu)

147. Athous (Heterathous) isshikii MIWA (Pl. V, f. 12)

Ins. Mats., II, No. 3, p. 142, pl. V, f. 20, (*Corymbites*) (1928) (Odaigahara).

Hab.—Honshiu: Mt. Odaigahara in Yamato 10–VIII, 1913 (S. ISSIKI). Kiushiu: Amakusa 27–VI, 1931 (T. ESAKI).

Distr.—Japan (Honshiu and Kiushiu).

148. Athous (Heterathous) desertor CANDÈZE (Pl. V, f. 9)

Mém. Soc. Sc. Liége, (2) V, p. 7, (*Psephus*) (1873) (Japan).—LEWIS, Ann. Mag. Nat. Hist., (6) XIII, p. 200, (1894) (Kôbe)

Hab.—Honshiu: Kôbe 12–VII, 1881 (G. LEWIS).

Distr.—Japan (Honshiu).

149. Athous (Heterathous) sanguinicollis FRIVALDSZKY

Term. Fuzetek, XV, p. 124, (1892) (East Japan).—LEWIS, Ann. Mag. Nat. Hist., (6) XIII, p. 200, (1894) (Oyama).—REITTER, Best.-Tab., 56, p. 32, (1905).—MIWA, Mushi, VI, No. 2, p. 73, (1933) (Daisen).

Hab.—Honshiu: Mt. Daisen in Hôki 15–VII, 1920 (K. TAKEUCHI); 16–VII, 1932 (K. ÔBAYASHI). Kiushiu: Kagoshima VII, 1923 (?).

Distr.—Japan (Honshiu and Kiushiu).

var. **flavipennis** var. nov. (Pl. V, f. 11).

Elytra dull brownish.

Hab.—Honshiu: Mt. Daisen 24–VII, 1932 (S. YAMAMOTO).

Distr.—Japan (Honshiu).

Subgenus **CREPIDOPHORUS** MULSANT et GUILLEBEAU

150. Athous (Crepidophorus) montanus sp. nov. (Pl. V, f. 15)

Reddish brown, with an aeneous or a metallic green lustre, covered with fine cinereous pubescence. Head impressed triangularly between the eyes, very closely punctulate on the vertex but much sparsely punctured in frons. Prothorax margined with a reddish yellow tint at the base, somewhat convex, being the widest at the base, gradually narrowing to the anterior margin, with the sides rather straight; hind angles excavated, acutely pointed and slightly turned outwards, with a feeble carina; the punctation on the pronotum rather faint and sparse; scutellum tongue-shaped, very closely and minutely punctulate, with a longitudinal smooth line in the middle. Elytra bright greenish, with an aeneous tint but somewhat reddish yellow at the outer margin, finely striate with punctures on the surface, the interstices convex, rather glabrous and scarcely punctate. Antennae dusky red, rather compressed and over twice as long as the prothorax, the two basal joints reddish yellow, the second joint nearly oblong and the smallest, the third triangular and similar to the fourth in size and form. Legs fulvous, the third and fourth tarsal joints somewhat lamellate below.

Length: 11–13 mm. Width: $2\frac{1}{2}$–$3\frac{1}{4}$ mm.

Hab.—Hokkaidô: Mt. Daisetsu 4~10–VIII, 1926 (H. KÔNO), Kumanodahira on Mt. Daisetsu 15–VIII, 1926 (H. KÔNO); Kutchan 6–VIII, 1905 (?); Rishiri VIII, 1924 (K. DOI). Honshiu: Mt. Nikkô VII (?); Mt. Nishikoma in Shinano 1–VIII, 1929 (T. NAKAMURA); Mt. Kurama 12–VIII, 1919 (M. SUZUKI).

Subgenus **GRYPATHOUS** REITTER

Key to the Species

1. Bull brown, with griseous pubescence; prothorax dark brown, with broad reddish area behind the anterior angle; elytra testaceous or pale brown.....*inornatus*

1'. Black, shining, with greyish pubescence; prothorax somewhat parallel sided, feebly canaliculate in the middle of pronotum; elytra rusty brown.....*jactatus*

151. Athous (Grypathous) inornatus LEWIS (Pl. V, f. 13)

Ann. Mag. Nat. Hist., (6) XIII, p. 225, (1894) (Junsai and Sapporo).—MIWA, Ins. Mats., II, No. 3, p. 138, (1928) (Saghalien and Hokkaidô); Monthl. Mag. Zool. Soc. Tôkyô, XLI, No. 492, p. 447, (1929) (Saghalien and Hokkaidô); Mushi, VI, No. 1, p. 31, (1933) (Shikaribetsu and Kamiotoineppu); ibid., No. 2, p. 73, (Atago?).

=*fulvipennis* MATSUMURA, Journ. Col. Agr., Tôhoku Imp. Univ., Sapporo, Japan, IV, p. 122, (1911) (Saghalien).

Hab.—Hokkaidô: Mt. Daisetsu 20-VII, 1928 (Y. MIWA); Jyôzankei 26-VII, 1928 (Y. MIWA); Sapporo VI, 1927 (Y. MIWA).

Distr.—Saghalien and Japan (Hokkaidô).

152. Athous (Grypathous) jactatus LEWIS (Pl. V, f. 14)

Ann. Mag. Nat. Hist., (6) XIII, p. 255, (1894) (Nara).—MATSUMURA, 6000 Illustr. Ins. Japan, p. 181, f. 397, ♀, (1931).—MIWA, Mushi, VI, No. 2, p. 71, (1933) (Oyayama and Minomo).

=*rubripennis* MATSUMURA, Thous. Ins. Japan, III, p. 100, pl. XLIX, f. 1, (*Corymbites*) (1906) (Hokkaidô and Honshiu).

Hab.—Honshiu: Lake Towada 25-VII, 1927 (Y. MIWA); Minobu VIII, 1927 (S. MINOWA); Gifu 10-VIII, 1913 (Y. MIWA); Toba in Ise 15-VII, 1924 (M. YANAGIHARA); Yunoyama in Ise VIII, 1925 (Y. MIWA); Nara 29-VI, 1881 (G. LEWIS).

Distr.—Japan (Hokkaidô and Honshiu).

Subfamily **CORYMBITINAE** SCHENKLING

Genus **CORYMBITES** LATREILLE

Subgenus **ANOSTIRUS** C. G. THOMSON

153. Corymbites (Anostirus) daimio LEWIS (Pl. V, f. 16)

Ann. Mag. Nat. Hist., (6) XIII, p. 256, (1894) (Yuyama, Chiuzenji and Sapporo).—MATSUMURA, 6000 Illustr. Ins. Japan, p. 182, f. 402, (1931) (Hokkaikô and Honshiu).

Hab.—Hokkaidô: Sapporo 10-VIII, 1880 (G. LEWIS); Lake Dôya to Mt. Usu VII, 1928 (Y. MIWA); Hakodate VII, 1927 (Y. MIWA). Honshiu: Kamikôchi in Shinano 15-VII, 1927 (H. FURUKAWA). Shikoku: Mt. Tsurugi in Awa VIII, 1923 (?).

Distr.—Japan (Hokkaidô, Honshiu and Kiushiu).

LEWIS reported in 1894 (Ann. Mag. Nat. Hist., (6) XIII, p. 256) that he has

a specimen of species belonging to CANDEZE's first section of the genus, taken by FENTON in Yezo, but it was not in good condition. It may be thought that the species is *C. castaneus* L. because the author has ever seen the species closely allied to the latter, labelled Sapporo, in the Entomological Laboratory, Hokkaidô Imperial University. Unfortunately the antennae and legs of that specimen were somewhat damaged so that he could not give an exact identification.

Subgenus **ACTENICERUS** KIESENWETTER

Key to the Species

1. Body metallic green; pronotum with a broad longitudinal channel and crimson tint (sometimes disappear) on each side of the channel; legs bright reddish yellow.....*odaisanus*
1′. Body dusky aeneous or fuscous with bronzy shining.....(2)
2. Body with a cupreous red shining, with numerous spots of ashy grey or griceous pile in the brownish pubescence (some of the species not spotted).....*pruinosus*
2′. Body with a bronzy shining; elytra not spotted.....(3)
3. Body with fulvous pubescence; elytra fuscous or reddish brown.....*selectus*
3′. Body with dense grey pubescence; elytra and prothorax correspond in colour.....(4)
4. Elytra wholly aeneous; antennae entirely black; legs red, the tarsi infuscate.....*aerosus*
4′. Elytra with exterior margins narrowly and somewhat obscurely red; antennae with three basal joints reddish, others rather black; legs wholly reddish.....*modestus*

154. Corymbites (Actenicerus) pruinosus MOTSCHULSKY (Pl. V, f. 18).

Etud. Ent., IX, p. 9, (1860) (Japan); Bull. Soc. Nat. Mosc., XXXIX, p. 167, (1866) (Japan).—CANDÈZE, Mém. Soc. Sc. Liége, (2) V, p. 24, (1873) (Kiushiu).—MATSUMURA, Thous. Ins. Jap., III, p. 103, pl. XLIX, f. 16, (1906) (Hokkaidô, Honshiu and Kiushiu); 6000 Illustr. Ins. Japan, p. 183, f. 405, (1931).—YOKOYAMA, Coleoptera of Japan (Nippon no Kôchû) p. 82, pl. X, f. 2, (1930).—MIWA, Mushi, VI, No. 2, pp. 71 & 73, (1933) (Fukuoka, Sangunzan, Tachibanayama, Kujusan, Hikosan, Daisen and Kurama).

var. **orientalis** CANDÈZE, Elat. nouv., IV, (Mém. Acad. Roy. Belg., XVII), p. 24, (1889) (Japan).—LEWIS, Ann. Mag. Nat. Hist., (6) XIII, p. 257, (1894) (Chiuzenji and Nikkô).—MATSUMURA, 6000 Illustr. Ins. Japan, p. 182, f. 404, (1931) (Honshiu and Kiushiu).

=*serrifer* (non LEWIS) MATSUMURA, Thous. Ins. Japan, III, p. 109, pt. XLIX, f 17, (1906) (Honshiu and Kiushiu).

var. **suzukii** MIWA, Ins. Mats., II, No. 3, p. 140, Pl. V, f. 14, (1928) (Kyôto).
var. **kiashianus** MIWA, Ins. Mats., II, No. 3, p. 139, (1928) (Chiuzenji).
var. **minoensis** var. nov. (Pl. VII, f. 29).

Typical species fuscous with cupreous lustre, with the fine brownish pubescence and numerous spots congested with griseous pile intermixed. The spots sometimes confluent laterally and forming three or four faciae on the elytra; legs commonly black (species from Hokkaidô or the mountainous regions of Honshiu). Prothorax sometimes much elevated and its pronotal median canaliculation obliterated, with the sides rather straight, the hind angles acuminate and diverged (*orientalis* CAND.). Pubescence more dusky greyish, body relatively shorter and the spots very faint (some of the species imperfectly developed). Elytra [reddish brown, with a metallic lustre; the pubscence greyish and the spot faint. The author has named this species as *C. suzukii*, but it seems to have been in a condition soon after moulting. Legs testaceous red in typical specimen but sometimes infuscate or fuscous, while some of them are of a bright reddish yellow (var. *kiashianus*). Body slender, prothorax narrower than elytra and parallel sided; legs reddish (one specimen from Aomori). Body 9½ mm. in length, fuscous, bronzy shining, with long cinereous pubescence; pronotal canaliculation very faint; antennae with the third joint shorter than the fourth; legs of a bright reddish yellow (var. *minoensis*).

Hab.—Hokkaidô: Sapporo VI, 1925 (Y. MIWA), VII, 1928 (H. KÔNO), VI, 1930 (C. WATANABE); Aoyamaonsen 11-VI, 1924 (Y. MIWA); Nopporo 10-VI, 1928 (Y. MIWA). Honshiu: Aomori VII, (S. MATSUMURA); Chiuzeuji VI, 1880 (G. LEWIS); Akatsuka in Tôkyô 28-IV, (K. SATÔ); Meguro in Tôkyô 23-IV, 1927 (K. SATÔ); Karuizawa 2-VI, 1932 (K. SATÔ); Toyono in Shinano 13-V, 1932 (K. SATÔ); Mure in Shinano 21-V, 1932 (K, SATÔ); Mt. Togakushi in Shinano 29-V. 1932 (K. SATÔ); Suzaka in Shinano 18-VI, 1932 K. SATÔ); Gifu 6-VI, 1932 (M. YANAGIHARA); Kamikôchi 10-VIII, 1930 (T. SHIRAKI); Arima in Settsu 17-VI, 1928 (K. SATÔ); Wakayama V, 1930 (S. SAKAGUCHI). Shikoku: Matsuyama in Iyo VI, 1915 (S. ARAKAWA).
Distr.—Japan.

155. Corymbites (Actenicerus) odaisanus MIWA (Pl. V, f. 19)

Ins. Mats., II, No. 3, p. 140, pt. V, f. 15, (1928) (Ôdaigahara-yama).—MIWA, Mushi, VI, No. 2, p. 73, (1933) (Yoshino)
Hab.—Honshiu: Ôdaigahara-yama in Yamato 11-VIII, 1913 (S. ISSIKI); Yoshino 6-VIII, 1918 (K. TAKEUCHI).
Distr.—Japan (Honshiu).

The specimen from Yoshino is wholly green colour on the upper surface, having narrower prothorax and lacking any firely reddish tint on the pronotum.

156. Corymbites (Actenicerus) aerosus LEWIS

Ent. Monthl. Mag., XVI, p. 157, (*Athous*) (1879) (Kii); Ann. Mag. Nat. Hist. (6) XIII, p. 257, (1894) (Kii and Chiuzenji).—MIWA, Mushi, VI, No. 2, p. 73, (1933) (Oyeyama and Kurama).
=*otsukae* MIWA, Ins. Mats., II, No. 3, p. 142, pt. V, f. 19, (1928).
Hab.—Kiushiu: Mt. Daisen in Bungo 4-V, 1912 (T. ÔTSUKA).
Distr.—Japan Honshiu and Kiushiu).

157. Corymbites (Actenicerus) modestus LEWIS (Pl. V, f. 17)

Ann. Mag. Nat. Hist., (6) XIII, p. 258, (1894) (Fukahori and Nikkô).
Hab.—Honshiu: Chiuzenji VI, 1880 (G. LEWIS); Kyôto 20-VII, 1924 (Y. MIWA); Wakayama 15-VII, 1930 (Y. MIWA).
Distr.—Japan (Honshiu).

158. Corymbites (Actenicerus) selectus CANDÈZE (Pl. V, f. 20)

Elat. nouv., I, (Mém. Soc. Acad. Belg., XVII) p. 53, (1865) (Japan).—LEWIS, Ann. Mag. Nat. Hist., (6) XIII, p. 258, (1894) (Sapporo).
Hab.—Hokkaidô: Sapporo VIII, 1880 (G. LEWIS), VII, 1928 (Y. MIWA); Mt. Eniwa 15-VI, 1928 (Y. MIWA); Toikanbetsu in Teshio 14-VII, 1930 (T. SHIRAKI); Mt. Daisetsu VII, 1928 (Y. MIWA)
Distr.—Japan (Hokkaidô).

159. Corymbites (Actenicerus) flavipennis LEWIS

Ann. Mag. Nat. Hist., (6) XIII, p. 258, (1894) (Miyanoshita).
Distr.—Japan (Honshiu).

Subgenus NEOPRISTILOPHUS BUYSSON

Key to the Species

1. Body blackish brown; elytra testaceous or dull brown and spotted.....(2)
1′. Body black.....(4)
2. Elytra wholly testaceous.....*testaceipennis*
2′. Elytra spotted.....(3)
3. The sutural interstices and both sides of the elytra longitudinally spotted.....*onerosus*
3′. Elytra dull brown, with three pale fasciae not well defined.....*vagepictus*
4. Body depressed; prothorax elongate and broader than the elytra, with a longitudinal median canaliculation on the pronotum; elytra narrowing posteriorly, with the external margin not expanded; antennae and legs bright reddish.....*serrifer*

4′. Prothox convex, short, narrower than elytra at the base and not canaliculate in the middle of pronotum; elytra widening posteriorly, with the external margin somewhat expanded; antennae and legs dusky red.....*dilatatus*

160. Corymbites (Neopristilophus) onerosus LEWIS (Pl. V, f. 25)

Ann. Mag. Nat. Hist., (6) XIII, p. 260, (1894) (Oyama, Tôkyô, Shimabara, Oyayama and Yuyama).

=*pacatus* LEWIS, Ann. Mag. Nat. Hist., (6) XIII, p. 261, (1894) (Tôkyô).—MATSUMURA, 6000 Illustr. Ins. Japan, p. 182, f. 405, (1931) (Honshiu).—MIWA, Mushi, VI, No. 2, pp. 71 & 73, (1933) (Wakasugiyama, Sobosan and Oyeyama).

Hab.—Honshiu: Oyama 27-V, 1880 (G. LEWIS) (type of *onerosus*); Arima 17-V, 1928 (K. SATÔ); ♂ Tôkyô VI, 1880 (G. LEWIS) (type of *pacatus*). Shikoku: Iyo VIII, 1910 (S. ARAKAWA).

Distr.—Japan (Honshiu, Shikoku and Kiushiu).

The author has compared the paratype of *onerosus* with that of *pacatus*, but could not find any difference between them beyond the sexual character. The specific name may be induced to the former.

161. Corymbites (Neopristilophus) vagepictus LEWIS (Pl. V, f. 24)

Ann. Mag. Nat. Hist., (6) XIII, p. 261, (1894) (Kumamoto).—MIWA, Mushi, VI, No. 2, p. 73, (1933) (Hanazono).

Hab.—Honshiu: Nikkô 1-VI, 1880 (G. LEWIS); Nakano in Tôkyô 9-III, 1912 (H. TAKABAYASHI); Gifu 14-V, 1923 (M. YANAGIHARA). Shikoku: Ochiai in Awa 14-VI, 1932 (K. ÔBAYASHI). Kiushiu: Kumamoto 25-IV, 1881 (G. LEWIS).

Distr.—Japan (Honshiu, Shikoku and Kiushiu).

162. Corymbites (Neopristilophus) dilatatus MIWA (Pl. V, f. 23)

Ins. Mats., II, No. 3, p. 143, pt. V, f. 22, (1928) (Sapporo).

Hab.—Hokkaidô: Sapporo 9-VI, 1924 (Y. MIWA); Sôunkei 4-VII, 1927 (H. KÔNO).

Distr.—Japan (Hokkaidô) and Saghalien.

163. Corymbites (Neopristilophus) serrifer CANDÈZE (Pl. VI, f. 3)

Mém. Soc. Sc. Liége, (2) V, p. 25, (1873) (Japan).—MIWA, Mushi, VI, No. 2, pp. 71 & 73, (1933) (Sobosan and Takao).

Hab.—Honshiu: Nikkô VI, 1880 (G. LEWIS); Tôkyô 14-VI, 1923 (?); Minobu 12-VII, 1928 (K. SATÔ); Suzaka in Shinano 18-VI, 1932 (K. SATÔ). Shikoku: Kôyadahira in Awa 7-VIII, 1913 (E. GALLOIS). Kiushiu: Konose 18-V, 1881 (G. LEWIS).

Distr.—Japan (Honshiu, Shikoku and Kiushiu).

164. Corymbites (Neopristilophus) testaceipennis MIWA (Pl. V, f. 26

Ins. Mats., II, No. 3, p. 138, pl. V, f. 10, (1928) (Sapporo).

Hab.—Hokkaidô: Sapporo 3-VIII, 1911 (S. MATSUMURA).

Distr.—Japan (Hokkaidô).

Subgenus SELATOSOMUS STEPHENS

Key to the Species

1. Elytra metallic green.....(2)
1′. Elytra not green.....(3)
2. Pronotum with a longitudinal median smooth line; elytra rugose.....*rugosus*
2′. Pronotum with a feeble median canaliculation; elytra having regular punctured striae.....*puncticollis*
3. Pronotum black and margined with a bright reddish colour on the lateral side.....*lateralis*
3′. Pronotum not margined with a reddish tint.....(4)
4. Body rather depressed, with an aenescent tint; prothorax elongate and much longer than wide.....(5)
4′. Body rather convex, black and shining; prothorax less in length than in width.....(8)
5. Body robust, clothed with a long cinereous pubescence; prothorax rather parallel sided, with a longitudinal median channel; legs brown; 20 mm.....(6)
5′. Body slender, with fulvous pubescence; prothorax narrow, with the sides sinuous or arched.....(7)
6. Elytra and pronotal posterior angles brownish.....*notabilis*
6′. Elytra bronzy, with purple tint.....var. *praenobilis*
7. Head longitudinally impressed in the middle; pronotum with a canaliculation on the disk and a carina on each hind angle.....*kurofunei*
7′. Head without impression; pronotum not canaliculate, the carina on each hind angle scarcely perceptible.....*tengu*
8. Dusky black, shining, with grey pubescence, thoracic lateral rim well marked; elytra with the striae very fine and in some light obliterated by a punctation of the interstices; legs dusky; 10 mm.....*hypocrita*
8′. Metallic shining; elytra distinctly punctate-striate.....(9)
9. Pronotum convex with the side rounded; elytra fuscous and of a brassy shine, the interstices not elevated and rugosely punctured; 12½ mm.....*alpensis*
9′. Pronotum convex, with the sides sinuous; elytra black and rather opaque, the interstices convex; 10 mm.....*motschulskyi*

165. Corymbites (Selatosomus) puncticollis MOTSCHULSKY (Pl. VI, f. 4)

Bull. Soc. Nat. Mosc., XXXIX, I, p. 167 (1866) (Jnpan).—LEWIS, Ann. Mag. Nat. Hist., (6) XIII, (1894) (Chiuzenji and Sapporo).—MATSUMURA, Thous. Ins. Japan, III, p. 112, pl. XLIX, f. 23, (1906) (Hokkaidô and Honshiu); Journ. Coll. Agr., Tôhoku Imp. Univ. Sapporo, IV, p. 123, (1911) (Saghalien); 6000 Illustr. Ins. Japan, p. 183, f. 407, (1931).—KÔNO et TAMANUKI, Monthl. Mag. Zool. Soc. Tôkyô, XXXVIII, No. 455, p. 282, (1926) (Zuimow in Saghalien).—MIWA, ibid., XLI, No. 492, (1929) (Saghalien and Kuriles); Mushi, VI, No. 1, pp. 30 & 31, (1933) (Saghalien and Hokkaidô); ibid., No. 2, p. 73, (Sapporo).

Hab.—Hokkaidô: Maruyama at Sapporo VI, 1927 (Y. MIWA), 27-V, 1930 (C. WATANABE); Garugawa near Sapporo 30-VI, 1930 (K. IGARASHI); Mt. Acan VII, 1928 (H. KÔNO). Honshiu: Chiuzenji 10-VI, 1880 (G. LEWIS).

Distr.—Japan (Hokkaidô and Honshiu), Kuriles and Saghalien.

166. Corymbites (Selatosomus) rugosus GERMAR (Pl. VI, f. 5)

Fauna Ins. Eur., XVIII, tab. 7, (*Ludius*) (1817) (Europe).—CANDÈZE, Mon., IV, p. 156, (1863) (Europe, Siberia and Araska).—KUHNT, Illustr. Best.-Tab. Käf. Deutschl., p. 642, (1913).—JAKOBSON, Žuki Rossiji, 1905-16, t. 39, f. 8, (1913).—MATSUMURA, Journ. Coll. Agr., Tôhoku Imp. Univ. Sapporo, IV, p. 122, (1911) (Saghalien); 6000 Illustr. Ins. Japan, p. 183, f. 408, (1931) (Siberia, Saghalien and Hokkaidô).—MIWA, Ins. Mats., II, No. 3, p. 140, (1928) (Saghalien and Hokkaidô).

Hab.—Hokkaidô: Mt. Daisetsu 7-VII, 1927 (H. KÔNO).

Distr.—Mountainous regions of central and south Europe, Caucasus, Siberia, Araska, Saghalien and Japan (Hokkaidô).

167. Corymbites (Selatosomus) lateralis LECONTE (Pl. VI, f. 6)

Trans. Amer. Phil. Soc., X, p. 439, (1853) (Oregon).—CANDÈZE, Mon., IV, p. 164, (1863) (Vancouver).—SCHÖNFELDT, Cat. Col. Japan, (Jaharb. d. Nass. Ver. f. Nat. 40) p. 86, (1887) (Japan).

Hab.—Hokkaidô: Hakodate VII, 1881 (G. LEWIS).

Distr.—Japan (Hokkaidô) and North America.

168. Corymbites (Selatosomus) notabilis CANDÈZE (Pl. VI, f. 1)

Mém. Soc. Sc. Liége, (2) V, p. 25, (1873) (Japan).—HEYDEN, Horae Soc. Ent. Ross., XXI, p. 256, (1887) (Corea).—LEWIS, Ann. Mag. Nat. Hist., (6) XIII, p. 259, (1894) (Nagasaki, Kumamoto and Yuyama).—MIWA, Mushi, VI, No. 2, p. 71, (1933) (Fukuoka).

Hab.—Kiushiu: Nagasaki 12-IV, 1881 (G. LEWIS); Kumamoto 17-IV, 1907 (H KAWAMURA).

Distr.—Japan (Kinshiu) and Corea.

var. **praenobilis** LEWIS

Ann. Mag. Nat. Hist., (6) XIII, p. 259, (*C. praenobilis*) (1894) (Idzu, Yokohama and Yuyama).

=var. *niger* MIWA, Ins., Mats., II, No. 3, p. 142, pl. V, f. 18, (1928) (Takao).

Hab.—Honshiu: Mt. Takao in Musashi 18-V, 1913 (E. GALLOIS); Karuizawa 2-V, 1932 (K. SATÔ). Kiushiu: Yuyama 10-V, 1881 (G. LEWIS) (type of *C. praenobilis*).

Distr.—Japan (Honshiu and Kiushiu).

There is not any difference between *C. notabilis* CAND. and *C. praenobilis* LEW. beyond the elytral colouration. The latter is a variety which was indicated by G. LEWIS in 1894 in the descriptive note of *C. notabilis* and in 1928, it was re-named by the author as var. *niger*.

169. Corymbites (Selatosomus) alpensis MIWA (Pl. V, f. 27)

Ins. Mats., II, No. 3, p. 143, pt. V, f. 21, (1928) (Mt. Tsubakura).

Hab.—Honshiu: Tsubakura in Shinano 27-VII, 1924 (H. KÔNO)

Distr.—Japan (Honshiu).

170. Corymbites (Selatosomus) motschulskyi FLEUTIAUX (Pl. V, f. 28)

Bull. Mus. Hist. Nat. Paris, p. 22, (1902) (Japan).

Hab.—Honshiu: Tokugo-tôge in Shinano 12-VII, 1927 (H. FURUKAWA); Kamikôchi 16~22-VII, 1920 (K. KAMIYA).

Distr.—Japan (Honshiu).

171. Corymbites (Selatosomus) hypocrita LEWIS

Ann. Mag. Nat. Hist., (6) XIII, p. 259, (1894) (Nikkô).—MIWA, Mushi, VI, No. 2, p. 73, (1933) (Kamikôchi).

Hab.—Hokkaidô: Mt. Daisetsu VII, 1928 (Y. MIWA); Lake Dôya to Mt. Usu VII, 1928 (Y. MIWA). Honshiu: Nikkô VI, 1880 (G. LEWIS).

Distr.—Japan (Hokkaidô and Honshiu).

172. Corymbites (Selatosomus) kurofunei sp. nov. (Pl. V, f. 21)

Depressed, black, with brassy tint, fine pale fulvous pubescent. Head densely punctured in the middle, but subrugose on the lateral part, with a feeble median longitudinal impression, the front angulate at sides and nearly vertical

in the middle. Prothorax much longer than wide, with the sides distinctly margined and slightly arched, very closely and rather evenly punctured on the disk, but much densely and somewhat rugosely on the lateral sides, with a feeble median longitudinal channel; hind angles acute, turned outwards and feebly carinate; scutellum oval, concave and minutely punctulate. Elytra with distinct regular striation in which the punctation is very faint and the surface rather glabrous, the interstrices relatively broad, very feebly punctured, rather transversely rugose. Antennae brownish black, the first joint robust and the longest, the second the shortest, the third longer but narrower than the fourth. Legs dark reddish.

Length: 14½ mm. Width: 3¾ mm.

Hab.—Honshiu: Shimoda in Izu V, 1929 (S. KATÔ).

Resembles somewhat *C. serrifer* CAND., but the body much narrower, aenescent, with dark brown antennae. This species has been treated under *Selatosomus* by the longer third joint of antennae while *C. serrifer* is included in *Neoplistilophus* by the shorter and narrower third joint of them.

173. Corymbites (Selatosomus) tengu sp. nov. (Pl. V, f. 22)

Black, aeneous, with fine fulvous pubescence. Head flattened, nearly oblong, very densely punctured, with the frontal margin rather transverse but somewhat depressed in the middle. Prothorax convex, much longer than wide, with the side slightly sinuous, very densely and rather finely punctured, the punctation much denser on the sides than on the disk; hind angles rather acute and turned outwards, with a carina hardly perceptible; scutellum relatively large, tongue-shaped and densely punctulate. Elytra punctate-striate, the interstices rather flattened, feebly punctured and transversely rugose. Antennae dark reddish or fuscous, the first joint stout and the longest, the second the shortest, the third twice as long as the preceding joint, narrower but rather longer than the fourth. Legs bright reddish yellow or light castaneous brown.

Length: 11 mm. Width: 3 mm.

Hab.—Honshiu: Mt. Togakushi in Shinano 20-VI, 1932 (K. SATÔ).

Closely allied to the preceding species in general outline but differs from the former as follows:

1. Body relatively narrower and much convex.
2. Pubescence shorter, finer and much bright in colour.
3. Head oblong and not impressed.
4. Pronotum having neither canaliculation nor pronotal posterior carina.

Subgenus **PARANOMUS** KIESENWETTER

Key to the Species

1. Body much convex, fusco-aeneous, shining; legs brown except the reddish tibiae; 7½ mm ..... *puerilis*
1′. Body rather depressed, fuscous, shining; legs obscure reddish; 7–8 mm ..... *mundulus*

174. Corymbites (Paranomus) puerilis CANDÈZE (Pl. VI, f. 7)

Mém. Soc. Sc. Liége, (2) V, p. 26, (1873) (Nagasaki).

Hab.—Honshiu: Nikkô VI, 1880 (G. LEWIS); Mt. Takao 6-V, 1912 (H. TAKABAYASHI); Miyanoshita V, 1880 (G. LEWIS). Shikoku: Sasayama in Iyo 16-V, 1910 (S. MATSUMURA).

Distr.—Japan (Honshiu, Shikoku and Kiushiu).

175. Corymbites (Paranomus) mundulus LEWIS (Pl. VI, f. 8)

Ent. Monthl. Mag., XVI, p. 157, (1879) (Kii and Yamato); Ann. Mag. Nat. Hist., (6) XIII, p. 262, (1894) (Yokohama, Kii, Miyanoshita, Oyama, Oyayama and Hagi).—MIWA, Monthl. Mag. Zool. Soc. Tôkyô, XLI, No. 492, p. 449, (1929) (Saghalien); Mushi, VI, No. 2, p. 73, (1933) (Daisen).

Hab.—Hokkaidô: Sounkei 4-VII, 1929 (H.KÔNO); Sapporo VI, 1928 (Y. MIWA). Honshiu: Komaba 12-I, 1912 (S. HIRAYAMA); Oyama 24-V, 1880 (G. LEWIS); Kiga 24-IV, 1880 (G. LEWIS). Kiushiu: Oyayama 31-V, 1881 (G. LEWIS).

Distr.—Japan (Hokkaidô, Honshiu and Kiushiu) and Saghalien.

Subgenus **METACTENICERUS** nom. nov.

Key to the Species

1. Pronotal posterior angles carinate; elytra bright reddish; 12 mm ..... *chlamydatus*
1′. Pronotal posterior angles not carinate ..... (2)
2. Pronotal canaliculation broad and conspicuous ..... (3)
2′. Pronotal canaliculation feeble ..... (5)
3. Obscure aeneous, opaque; antennae black; legs clear red, tarsi dusky; 11–12 mm ..... *gratus*
3′. Elytra reddish ..... (4)
4. Elytra rusty red; legs reddish; 9½–10 mm ..... *nikkoensis*
4′. Elytra bright red; legs infuscate; 9½ mm ..... *rubripennis*

5. Head and thorax obscure aeneous; pronotal posterior angles brownish; elytra brown, with a brassy tint; 8 mm ..... *obscuripes*

5′. Body black, with a metallic lustre ..... (6)

6. Black with dull brownish tint; legs dusky, with the knees and tibiae paler; 8 mm ..... *concolor*

6′. Black with a bronze shine; legs yellowish red; 9 mm ..... *lewisi*

176. Corymbites (Metactenicerus) gratus LEWIS (Pl. VI, f. 12)

Ann. Mag. Nat. Hist., (6) XIII, p. 262, (1894) (Ichiuchi, Chiuzenji, Miyanoshita and Junsai).—MIWA, Trans. Nat. Hist. Soc. Formosa, XIX, No. 103, p. 348, (1929) (Yakushima); Mushi, VI, No. 2, p. 73, (1933) (Kibune, Kyôto and Minomo).

Hab.—Hokkaidô: Teshio 3-VII, 1930 (?); Sapporo 7-VII, 1928 (Y. MIWA); Nopporo 10-V, 1928 (Y. MIWA); Junsai 3-VIII, 1880 (G. LEWIS). Honshiu: Mt. Takao in Musashi 26-IV, 1928 (H. FURUKAWA); Mukôgaoka at Kanagawa 29-IV, 1929 (K. SATÔ); Subashiri 4-V, 1880 (G. LEWIS). Shikoku: Mt. Tsurugi 14-VI, 1932 (K. ÔBAYASHI). Kiushiu: Yakushima 30-IV, 1929 (S. ISSIKI).

Distr.—Japan.

177. Corymbites (Metactenicerus) nikkoensis JAKOBSON (Pl. VI, f. 11)

Žuki Rossiji, 1905-16, p. 740, (1913) (nom. nov.)

=*ferrugineipennis* (nec. CANDÈZE, 1879) LEWIS, Ann. Mag. Nat. Hist., (6) XIII, p. 262, (1894) (Nikkô and Chiuzenji).

Hab.—Honshiu: Nikkô VI, 1880 (G. LEWIS); Chiuzenji 3-VI, 1916 (E. GALLOIS); Mt. Mitake in Musashi 6-VI, 1926 (T. AKASHI).

Distr.—Japan (Honshiu).

178. Corymbites (Metactenicerus) rubripennis LEWIS

Ann. Mag. Nat. Hist., (6) XIII, p. 263, (1894) (Higo).

Distr.—Japan (Kiushiu).

179. Corymbites (Metactenicerus) chlamydatus LEWIS (Pl. VI, f. 13)

Ann. Mag. Nat. Hist., (6) XIII, p. 263, (1894) (Yuyama).

Hab.—Honshiu: Minomo 5-V, 1919 (T. ESAKI).

Distr.—Japan (Honshiu and Kiushiu).

180. Corymbites (Metactenicerus) concolor LEWIS (Pl. VI, f. 10)

Ann. Mag. Nat. Hist., (6) XIII, p. 263, (1894) (Yuyama).

Hab.—Honshiu: Chiuzenji 22-VII, 1916 (E. GALLOIS); Mt. Takao 7-IV, 1929 (S. ISSIKI). Kiushiu: Higo V, 1881 (G. LEWIS).

Distr.—Japan (Honshiu and Kiushiu).

181. Corymbites (Metactenicerus) obscuripes LEWIS (Pl. VI, f. 9)

Ann. Mag. Nat. Hist., (6) XIII, p. 264, (1894) (Miyanoshita).

Hab.—Honshiu: Nikkô VI, 1880 (G. LEWIS); Chiuzenji 6-VI, 1911 (S. MATSUMURA); Gifu 14-VI, 1924 (M. YANAGIHARA).

Distr.—Japan (Honshiu?).

182. Corymbites (Metactenicerus) lewisi FLEUTIAUX

Bull. Mus. Hist. Nat. Paris, p. 23, (1902) (Japan).

Distr.—Japan (Honshiu?).

Genus HYPOGANUS KIESENWETTER

Key to the Species

1. Pronotum narrow, distinctly longer than wide, with the sides somewhat sinuous... ..... *japonicus*

1′. Pronotum spherically convex, less longer than wide, with the sides well arched and not sinuous ..... *mirabilis*

183. Hypoganus japonicus FLEUTIAUX

Bull. Mus. Hist. Nat. Paris, No. 1, p. 23, (*Corymbites*) (1902).

Narrow, a little convex, black and shining, lacking pubescence. Head finely and sparsely punctured. Antennae black, feebly serrate; the third joint longer than the second. Pronotum narrow, distinctly longer than wide, somewhat sinuate at the sides, very finely and rather sparsely punctate. Scutellum semicircular. Elytra much wider than prothorax, slightly dilated posteriorly and deeply striate; the interstices convex and scarsely rugose, undersurface black. Legs brown or red.

Length: 7½ mm. Width: ?

The type of this species is unknown to the author, but it has been transfered to this genus from *Corymbites* on account of its bare body or lacking pubescence, which is mentioned in the original description.

184. Hypoganus mirabilis sp. nov. (Pl. VII, f. 26)

Dark reddish brown, glabrous and very shiny. Head slightly impressed between the eyes, coarsely and rather rugosely punctured. Prothorax spherically convex, with the sides well arched and distinctly margined, very finely and

sparsely punctulate on the pronotum, but the punctures rather denser on the lateral parts than on the disk; hind angles very short and feebly carinate; scutellum nearly oval, very closely and coarsely punctulate, thickly covered with long griseous pubescence. Elytra deeply and distinctly punctate-striate, the interstices rather flattened, minutely and very sparsely punctulate, with the outer margin slightly expanded. Antennae dark reddish, the second joint the shortest, the third about one and half time as long as the preceding joint, and less shorter but rather narrower than the fourth, from the fourth joint to the tenth triangular and together forming a serration. Legs bright reddish yellow.

Length: 13½ mm. Width: 4 mm.

Hab.—Honshiu: Gifu 10-VIII, 1928 (Y. MIWA).

Genus ORITHALES KIESENWETTER

185. Orithales yezoensis sp. nov. (Pl. VII, f. 28)

Wholly black, with brassy tint, short fine cinereous pubescent. Head slightly impressed between the eyes, very densely but coarsely punctured, with the frontal carina obliterated in the middle. Prothorax convex, the widest at the base, gradually narrowing anteriorly, slightly sinuous at the sides, very closely punctured on the pronotum, with the lateral sides depressed, slightly expanded and distinctly margined; hind angles long, acute and slightly turned outwards, without carina; scutellum nearly oval but rather pointed behind, with dense and minute punctulation. Elytra striate with strong punctures, the interstices flattened, coarsely punctulate and rather transversely rugose. Antennae pectinate, fuscous and not shining, the second and third joints small and nearly equal in length, from the fourth joint to tenth each elongate triangular and seems to be lamellate by the prolongation of an angle, the apical joint elongate, narrow and obtusely pointed. Legs dark red.

Length: 7 mm. Width: 1¾ mm.

Hab.—Hokkaido: Mt. Acan VII, 1928 (H. KÔNO and C. WATANABE).

Subfamily DIMINAE SCHENKLING

Genus YEZODIMA MIWA

Key to the Species

1. Body covex, fuscous; thorax and elytra margined with pale yellowish tint..... .....*convexum*

1′. Body rather depressed, unicolorous, with a brassy shine .....*aeneonigra*

186. Yezodima convexum MIWA

Ins. Mats., III, No. 1, p. 39, Pl. I, Fig. 2, (1928) (Hokkaidô and Kuriles); Monthl. Mag. Zool. Soc. Tôkyô, XLI, No. 492, p. 451, (1929) (Saghalien).

Hab.—Hokkaidô: Zenibako 4-VI, 1916 (S. MATSUMURA).

Distr.—Japan (Hokkaidô), Kuriles and Saghalien.

187. Yezodima aeneonigra MIWA

Ins. Mats., III, No. 1, p. 39, Pl. I, Fig. 3, (1928) (Sapporo).

Hab.—Hokkaidô: Sapporo 8-VII, 1907 (S. MATSUMURA).

Distr.—Japan (Hokkaidô)

Subfamily LUDIINAE FLEUTIAUX

Genus LUDIUS BERTHOLD

Key to the Species

1. Elongate, fuscous, with golden brownish pubescence; legs reddish .....*sieboldi*
1′. Body wholly black .....(2)
2. Broad and robust, with black pubescence; prothorax narrowest in front, rounded behind the anterior angles, then slightly and gradully widening to the base. with a narrow smooth line down the centre of pronotal disk.....*niponensis*
2′. Elongate, with brownish pubescence; prothorax narrowest in front, gradually widening to the base, very feebly sinuous before the base.....*candezei*

188. Ludius sieboldi CANDÈZE (Pl. VI, f. 19)

Mém. Soc. Sc. Liége, (2) V, p. 27, (1873) (Japan).—LEWIS, Ann. Mag. Nat. Hist., (6) XIII, p. 265, (1894) (Nagasaki, Kôbe and Sapporo).—MIWA, Ins. Mats., III, No. 1, p. 40, (1928) (Mt. Daisetsu, Shiria, Yoshino, Awa, Haki and Formosa); Trans. Nat. Hist. Soc. Formosa, XXII, No. 113, p. 75, (1931) (Formosa), Mushi, VI, No. 2, p. 71, (1933) (Wakasugiyama).

Hab.—Hokkaidô: Sapporo 10-VIII, 1880 (G. LEWIS), 10-VIII, 1913 (S. MATSUMURA). Honshiu: Shizuoka 4-VIII, 1928 (C. WATANABE). Kiushiu: Ohita 5-VIII, 1918 (S. ARAKAWA).

Distr.—Japan, Loo-Choo (Ôshima) and Formosa.

189. Ludius niponensis LEWIS (Pl. VI, f. 21)

Ann. Mag. Nat. Hist., (6) XIII, p. 264, (1894) (Sapporo and Nikkô).—FLEU-

TIAUX, Wien Ent. Zeit., XLVII, 2, p. 97, (1930) (Formosa).—MIWA, Trans. Nat. Hist. Soc. Formosa, XXIII, No. 125, p. 158, (1933) (Corea).

Hab.—Hokkaidô: Sapporo VII. 1907 (S. ARAKAWA), VII, 1928 (Y. MIWA). Honshiu: Chiuzenji 7-VIII, 1917 (E. GALLOIS).

Distr.—Japan (Hdkkaidô and Honshiu), Corea and Formosa.

190. Ludius candezei LEWIS (Pl. VI, f. 20)

Ann. Mag. Nat. Hist., (6) XIII, p. 265, (1894) (Nagasaki).—Schwarz, in Wytsman, Gen. Ins. 46, Elat., p. 258, (*Diplostethus*) (1907).

Hab.—Kiushiu: Nagasaki VII, 1930 (Y. MIWA).

Distr.—Japan (Kiushiu).

O. SCHWARZ established new genus *Diplostethus* in 1907, and transfered *L. candezei* to this. The generic character is in the form of prosternal process, in which the process is horizontal and bent at rightangle behind the fore coxal cavities, then prolonged horizontally and again rightangularly notched at the apex. In the diagnosis of *L. candezei* the above character is not mentioned, but described as the prosternal posterior process is very long and the notch is close to the tip.

One specimen collected from Nagasaki has been identified as *L. candezei* LEW. by the author at present, in which the prosternal process shows the characteristic form of *Ludius*, but relatively longer in form and the lower plane rather short like that of *L. niponensis*. It differs somewhat from the original description in the general aspect as follows:

Body smooth, rather opaque; antennae and legs dark piceous; head impressed elliptically in front; scutellum not much convex but feebly carinate in the middle; elytra hardly striate and the interstices obscure.

The genus *Diplostethus* seems to be defined only in the central region of America.

Genus NEOTRICHOPHORUS JAKOBSON

Key to the Species

1. Body fuscous, with fulvous pubescence; elytra testaceous, semewhat infuscate at the suture; antennae with the second and third joints very small and nearly equal in size; each pronotal posterior angle with an acute carina; 8 mm.....*linteatus*

1′. Body fuscous, shiny, with a brownish pubescence; usually longer than 11 mm ... .(4)

2. Antennae with the second and third joints very short and nearly equal in size, from the fourth joint to the tenth together forming an acute serration; prothorax

longer than wide, nearly trapezoidal, with a single carina on each hind angle... .....*junior*

2′. Antennae with the second and third joints very short and nearly equal in length, but the third more slender than the former. from the fourth joint to the tenth moderately serrate; prothorax nearly as long as wide, convex and parallel sided, with double carinae on each hind angle.....*plebejus*

191. Neotrichophorus linteatus CANDÈZE (Pl. VI, f. 17)

Mém. Soc. Sc. Liége, (3) V, p. 28, (*Ludius*) (1873) (Japan).—LEWIS, Ann. Mag. Nat. Hist., (6) XII, p. 266, (*Crigmus*) (1894) (Maiyasan).

=*ligatus* SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. p. 259, (*Trichophorus*) (1907).

Hab.—Honshiu: Kôbe 1872 (G. LEWIS). Shikoku: Kôyadahira in Awa 4-VIII, 1913 (E. GALLOIS).

Distr.—Japan (Honshiu and Shikoku).

192. Neotrichophorus junior CANDÈZE (Pl. VI, f. 16)

Mém. Soc. Sc. Liége, (3) p. 27; (*Ludius*) (1873) (Japan).—Ann. Mag. Nat. Hist., (6) XIII, p. 266, (*Crigmus*) (1894) (Yuyama, Ichiuchi, Kashiwagi and Sapporo).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. p. 256, (*Trichophorus*) (1907).—MIWA, Ins. Mats., III, No. 1, p. 42, (1928) (Tôkyô, Chichibu, Narita, Sapporo and Formosa); Mushi, VI, No. 2, pp. 71 & 73, (1933) (Fukuoka, Ôyeyama and Yoshino).

Hab.—Honshiu: Tôkyô ♀ 23-V, 1913; ♂ 22-V, 1916 (E. GALLOIS); Shimoda in Izu VI, 1929 (S. KATÔ); Kashiwagi to Ôdaigahara 20-VI, 1881 (G. LEWIS); Ichinotani at Suma 18-IX, 1929 (M. SUZUKI). Kiushiu: Kumamoto 21-V, 1881 (G. LEWIS).

Distr.—Japan (Hokkaidô, Honshiu and Kiushiu) and Formosa.

193. Neotrichophorus plebejus CANDÈZE (Pl. VI, f. 18)

Mém. Soc. Sc. Liége, (3) V, p. 28, (*Ludius*) (1873) (Japan).—LEWIS, Ann. Mag. Nat. Hist., (6) XIII, p. 266, (*Crigmus*) (1894) (Nagasaki, Ashiwo and Sapporo).—FLEUTIAUX, Bull. Soc. Ent. Fr., p. 200, (*Ludius*) (1906); Wien. Ent. Zeit., XLVII, 2, p. 97, (1930) (Formosa).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat. p. 259, (*Trichophorus*) (1906).—MIWA, Ins. Mats., III, No. 1, p. 42, (1928) (Tôkyô, Nishikibe, Kôyadahira, Corea, Loo-Choo and Formosa); Trans. Nat. Hist. Soc. Formosa, XXI, No. 113, p. 75, (1931) (Formosa); Mushi, VI, No. 1, p. 29, (1933) (Tsushima); ibid., VI, No. 2, pp. 71 & 73, (Kagoshima and Ôsaka).

Hab.—Hokkaidô: Sapporo VIII, 1880 (G. LEWIS). Honshiu: Utsunomiya VII,

1924 (S. NAKAMURA); Shizuoka 24-VII, 1928 (C. WATANABE); Miho in Suruga X, 1930 (K. SATÔ); Yokkaichi in Ise VIII, 1924 (Y. MIWA); Wakayama VIII, 1929 (K. HICHIRYÔZAKO), V, 1930 (S. SAKAGUCHI). Shikoku: Kôyadahira in Awa 7-VIII, 1913 (E. GALLOIS). Kiushiu: Wakamatsu VIII, 1926 (I. TATEISHI); Saseho 20-VIII, 1929 (C. WATANABE); Tsushima 28-VII, 1930 (H. HORI).

Distr.—Japan, Corea, Loo-Choo and Formosa.

Genus APHANOBIUS ESCHSCHOLTZ

194. Aphanobius unicolor FLEUTIAUX

Bull. Mus. Hist. Nat. Paris, p. 357, (1900) (Japan).

Distr.—Japan (Honshiu?).

The body length of this species measures 25 millimeters and none of the species which was found in Japan agreeing with the diagnosis otherwise than *Ludius sieboldi* CANDÈZE or *Tetrigus lewisi* CANDÈZE. This species is usually considered to be synonymous with one of the latters.

195. Agonischius obscuripes GYLLENHAL

in SCHÖNHERR, Syn. Ins., III, Append. p. 131, (*Elater*) (1817) (Caucasus).—CANDÈZE, Mon., IV, p. 421. t. 5, f. 5, (*Agonischius*) (1863) (China, Himalaya, Hindustan and Cochin-China); Mém. Soc. Sc. Liége, (3) V, p. 31, (1873) (Kagoshima).—BATES, Proc. Zool. Soc. Tond., p. 350, (1866) (Formosa).—HEYDEN, Deutche Ent. Zeitschr., XXX, p. 286, (1886) (Peking).—LEWIS, Ann. Mag. Nat. Hist., (6) XIII, p. 314, (1894) (Central Japan).—FLEUTIAUX, Ann. Soc. Ent. Fr., LXXXVII, p. 261, (1918) (Tonkin, China and Formosa).—MIWA, Ins. Mats., III, No. 1, p. 47, (1928) (Loo-Choo and Formosa); Trans. Nat. Hist. Soc. Formosa, XIX, No. 103, p. 350, (1929) (Ishigaki); ibid., XXI, No. 112, p. 79, (1931) (Formosa); Wien. Ent. Zeit., XLVII, 2, p. 94, (1930) (Formosa).

Distr.—Japan (Kiushiu), Loo-Choo, Corea (var.), Formosa, China, Cochin-China, Tonkin, Hindustan, Himalaya and Caucasus.

Genus AGRIOTES ESCHSCHOLTZ

Key to the Species

1. Body entirely fulvous, with fuscous pubescence; head sometimes black; 4 mm... ..... *helvolus*

1′. Body not fulvous..... (2)

2. Body black, shining, with griseous pubescence; elytra having four markings congested with obscure pile; legs fulvous; body sometimes entirely testaceous (var.); 5 mm..... *leucophaeatus*

2′. Body neither marked on the elytra nor wholly testaceous..... (3)

3. Body obscure brown, with greyish pubescence; pronotum arched anteriorly, straight at sides, convex and punctate, where the punctures are of various size, viz. having many fine punctures with a number of large ones between them; elytral interstices feebly rugose; antennae and legs pale brown; 5 mm..... ..... *palustris*

3′. Pronotal puncture even..... (4)

4. Body dark brown, shining, pubescent; pronotum parallel at the sides until well before the hind angles; hind angles not carinate, long, rather acute and turned outwards; elytral interstices sparsely punctulate, obscurely rugose; antennae and legs pale; $5\frac{1}{2}$ mm..... *elegantulus*

4′ Pronotal posterior angle more or less carinate..... (5)

5. Dusky brown, with griseous pubescence; head with a faint median impression; pronotum convex, infuscate on the disk, with the margins reddish brown; hind angles slightly turned outwards and carinate; elytra markedly scabrous, reddish brown, but distinctly darker on interstices 2, 3, 4, 5; antennae and legs pale brown; $7\frac{1}{4}$–9 mm..... (6)

5′. Pronotum and elytra without coloured margin..... (7)

6. Body rather shorter and narrower; prothorax densely but finely punctured; elytra finely scabrous..... *ogurae*

6′. Body much longer and robust; prothorax more closely punctured; elytra very scabrous on interstices..... *fuscicollis*

7. Antennae with the third joint scarcely as long as the second; body black, opaque..... (8)

7′. Antennae with the second joint longer than the third; body shining..... (9)

8. Pronotum elongate and parallel sided; antennae slender, longer than head and prothorax combined..... *higonius*

8′. Pronotum wider, narrowest anteriorly, gradually widening to the posterior angle, with the sides straight; antennae shorter than the head and prothorax combined..... *insidiosus*

9. Body black; elytra testaceous..... (13)

9′. Body unicolour..... (10)

10. Dull brownish yellow, often infuscate on the pronotum, sometimes on the elytra or elytral suture darker; $4\frac{3}{4}$–6 mm..... *yasumatsui*

10′. Body black..... (11)

11. Body much more robust; pubescence somewhat golden shining; pronotum having a median canaliculation at the base; hind angles relatively short and obtuse behind; 13–15½ mm.....*puberulus*

11′. Body slender; pronotum without canaliculation, hind angles acuminate and pointed behind.....(12)

12. Body relatively wider, robust, with wholly red legs; thoracic carina scarcely perceptible; 9 mm.....*sepes*

12′. Body narrow, slender, with brownish femora and ferrugineous tibiae and tarsi; thoracic carina well marked; 8 mm.....*exulatus*

13. Body robust; thorax shorter and wider; elytral suture infuscate; 12¼ mm.....*persimilis*

13′. Body elongate and slender; thorax longer and narrower; elytra wholly testaceous.....(14)

14. Of a larger size; 13 mm.....*longicollis*

14′. Of a smaller size; 10 mm.....*sericeus*

196. Agriotes sericeus CANDÈZE (Pl. VI, f. 22)

Elat. nouv., II, p. 49, (Ann. Soc. Ent. Belg., p. 193) (1878) (Awomori).—KOBAYASHI, Trans. Kwansai Ent. Soc., No. 2, 62, (1931) (Shikotan).—MIWA, Mushi, VI, No. 2, p. 73, (1933) (Ibuki, Hakuba, Minomo and Tokugo-tôge).

=*sericans* LEWIS, Ent. Monthl. Mag., XVI, p. 157, (1879) (Awomori); Ann. Mag. Nat. Hist., (6) XIII, p. 312 (1894) (Subashiri and Wada-tôge): teste.

Hab.—Hokkaidô: Sapporo VII, 1928 (Y. MIWA); 19-VI, 1930 (H. KÔNO); Jôzankei 26-VII, 1930 (Y. MIWA). Honshiu: Lake Towada 25-VII, 1928 (Y. MIWA); Nasu 15-VII, 1930 (K. SATÔ); Nikkô 17-VII, 1930 (M. CHÛJÔ); Senjôgahara 15-VII, 1929 (K. KAMIYA); Karuizawa 2-VI, 1932 (K. SATÔ); Subashiri V, 1880 (G. LEWIS); Mt. Togakushi 20-VI, 1932 (K. SATÔ); Iwamurata in Shinano 27-V, 1932 (K. SATÔ); Mt. Norikura in Hida 27-VII, 1930 (K. KAMIYA); Kamikôchi 10~12-VIII, 1930 (T. SHIRAKI).

Distr.—Japan (Hokkaidô and Honshiu) and Kuriles (Shikotan).

197. Agriotes longicollis LEWIS (Pl. VI, f. 23)

Ann. Mag. Nat. Hist., (6) XIII, p. 311, (1894) (Nikkô).

Hab.—Honshiu: Nikkô VI, 1880 (G. LEWIS).

Distr.—Japan (Honshiu).

After carefully examining each paratype of the preceding two species, the author could not find any difference between them, beyond the larger size of the latter. The body length ts very variable in *sericeus*, and in thirty five specimens of the species they are arranged continually in a long series from 9 mm to 13 mm. The larger species are confined to the mountainous regions of northern Honshiu, while the smaller species attacks the root of wheat in the fields.

A. longicollis is considered to be a local variety of *sericeus*.

198. Agriotes persimilis LEWIS (Pl. VI, f. 24)

Ann. Mag. Nat. Hist., (6) XIII, p. 312, (1894) (Junsai).—MIWA, Ins. Mats., III, No. 1, p. 43, (1928) (Saghalien, Kuriles and Honshiu); Monthl. Mag. Zool. Soc. Tôkyô, XLI, No. 492, p. 451, (1929) (Kuriles and Saghalien); Mushi, VI, No. 2, p. 73, (1933) (Kamikôchi).

Hab.—Nikkô 17-VII, 1930 (M. CHÛJÔ); Tokugo-tôge 2-VIII, 1931 (K. ÔBAYASHI).

Distr.—Saghalien, Kuriles and Japan (Hokkaidô and Honshiu).

199. Agriotes puberulus MIWA (Pl. VI, f. 25)

Ins. Mats., III, No., 1, p. 43, pl. 1, f. 8, (1928) (Sapporo and Iwate Pref.).

Hab.—Hokkaidô: Sopporo 25-VI, 1927 (Y. MIWA); Nopporo 10-VI, 1928 (Y. MIWA).

Distr.—Japan (Hokkaidô and Honshiu).

200. Agriotes sepes LEWIS (Pl. VI, f. 26)

Ann. Mag. Nat. Hist., (6) XIII, p. 312, (1894) (Kii).

Hab.—Shikoku: Mt. Tsurugi 14-VI, 1932 (K. ÔBAYASHI).

Distr.—Japan (Honshiu and Shikoku).

201. Agriotes exulatus CANDÈZE (Pl. VI, f. 28)

Mém. Soc. Sc. Liége, (2) V, p. 29, (1873) (Japan).

Hab.—Kiushiu: 26-III, 1881 (G. LEWIS); Mt. Kirishima 3-V, 1929 (S. ISSIKI).

Distr.—Japan (Kiushiu).

202. Agriotes elegantulus LEWIS (Pl. VI, f. 27)

Ann. Mag. Nat. Hist., (6) XIII, p. 313, (1894) (Fukushima).

Hab.—Shikoku: Mt. Tsurugi 14-VI, 1932 (K. ÔBAYASHI).

Distr.—Japan (Honshiu and Shikoku).

203. Agriotes leucophaeatus CANDÈZE

Mém. Soc. Sc. Liége, (2) V, p. 30, (1873) (Japan).

Distr.—Japan (Kiushiu).

204. Agriotes higonius LEWIS (Pl. VII, f. 3)

Ann. Mag. Nat. Hist., (6) XIII, p. 43, (*Megapenthes*) (1894) (Ichibusayama and Oguma).—MIWA, Trans. Nat. Hist. Soc. Formosa, XIX, No. 103, p. 350, (1929) (Yakushima); Mushi, VI, No. 2, pp. 71 & 73, (1933) (Kujusan and Hanazono).

Hab.—Kiushiu: Yuyama 12-V, 1881 (G. LEWIS); Nagasaki 6-VII, 1913 (S. MATSUMURA); Yakushima IV, 1929 (S. ISSIKI).

Distr.—Japan (Kiushiu).

205. Agriotes insidiosus LEWIS (Pl. VII, f. 4)

Ann. Mag. Nat. Hist., (6) XIII, p. 44, (*Megapenthes*) (1894) (Chiuzenji and Niohôzan).

Hab.—Honshiu: Nikkô VI, 1880 (G. LEWIS); Nasu 15-VII, 1930 (K. SATÔ); Karuizawa 2-IV, 1932 (K. SATÔ); Mt. Togakushi 20-V, 1932 (K. SATÔ).

Distr.—Japan (Honshiu).

The two preceding species were reported by G. LEWIS under the genus *Megapenthes*, but the head of these species with a single frontal border and lacking a frontal crest or any nasal area. Moreover the thoracic lateral margin reaches the lower margin of the eye. These characteristics are not found in *Megapenthes*, but in *Agriotes*, so that they have been transfered to the latter.

206. Agriotes helvolus CANDÈZE (Pl. VII, f. 2)

Mém. Soc. Sc. Liége, (2) V, p. 30, (1873) (Nagasaki).—LEWIS Ann. Mag. Nat. Hist., (6) XIII, p. 313, (1894) (Nagasaki, Kobe, Hakone and Junsai).

Hab.—Hokkaidô: Junsai 28-VII, 1880 (C. LEWIS); Maruyama at Sapporo 28-VII, 1919 (S. MATSUMURA). Honshiu: Dorogawa 7-VIII, 1913 (S. ISSIKI).

Distr.—Japan (Hokkaidô and Honshiu).

207. Agriotes palustris LEWIS (Pl. VII, f. 1)

Ann. Mag. Nat. Hist., (6) XIII, p. 314, (1894) (Tôkyô, Nikkô, Ogura and Sakai).

Hab.—Honshiu: Nikkô VI, 1880 (G. LEWIS); Takasago in Harima 25-VII, (?).

Distr.—Japan (Honshiu).

208. Agriotes ogurae LEWIS

Ann. Mag. Nat. Hist., (6) XIII, p. 313, (1894) (Ogura lake).

Distr.—Japan (Honshiu).

209. Agriotes fuscicollis MIWA (Pl. VII, f. 7)

Ins. Mats., III, No. 1, p. 44, pl. I, f. 9, (1828) (Kyôto: local. errat.).—Mushi, VI, No. 1, p. 30, (1933) (Saghalien).

Prothorax dark reddish, not margined, without fuscous disk, more closely punctured. Elytra much more scabrous on the interstices. Some specimens from Hokkaidô are of a dusky brownish colour, with the margins reddish brown. The body is longer and robuster than *ogurae*.

Hab.—Hokkaidô: Sapporo VI, 1926; VIII, 1930 (Y. MIWA); Teshio 10-VII, 1930 (T. SHIRAKI); Hakodate VII, (S. KUWAYAMA).

Distr.—Japan (Hokkaidô) and Saghalien.

210. Agriotes yasumatsui MIWA (Pl. VII, f. 8 ♀, 9 ♂)

Mushi, VI, No. 2, p. 71, (1933).

Dull brownish yellow, often infuscate on the pronotum, sometimes on the elytra entirely or only at the sutural part darker, slightly shinning, covered with long fine griseous pile. Head rather fuscous, convex and vertical, somewhat sparsely and rather unevenly punctate on the head but much more densely in frons. Prothorax convex, parallel sided, very densely and rather coarsely punctured; hind angles acute and slightly turned outwards, with a long acute carina which is prolonged forwards along the lateral margin to the middle of the sides; scutellum tongue-shaped or oval, very coarsely and unevenly punctulate. Elytra strongly punctate-striate, the interstices convex, closely and rather rugosely punctulate. Antennae reddish yellow, the second joint longer and robuster than the third, from the fourth joint to the tenth each triangular and together forming a feeble serration. Legs much paler than the antennae.

The female having a relatively wider thorax than the male and the body of the former is also generally robust.

Body robustious, more sniny and darker coloured than *A. helvolus* CAND. in general outline.

Length: $4\frac{3}{4}$–6 mm. Width: 1–$1\frac{1}{2}$ mm.

Hab.—Kiushiu: Mt. Sobosan in Bungo 3-VIII, 1931 (K. YASUMATSU).

Distr.—Japan (Kiushiu).

Genus DOLOPIUS ESCHSCHOLTZ

211. Dolopius marginatus LINNAEUS (Pl. VII, f. 10)

Syst. Nat., ed. 10, I, p. 405, (*Elater*) (1758) (Europe).—MIWA, Monthl. Mag. Zool. Soc. Tôkyô, XLI, No. 492, p. 452, (1929) (Saghalien).

var. **ferrugineipennis** MOTSCHULSKY, Bull. Soc. Nat. Mosc., XXXIX, I, p. 166, (*Agriotes*) (1866).—MIWA, Trans. Nat. Hist. Soc. Formosa, XIX, No. 103, p. 350, (1929) (Yakushima).

=*candezei* LEWIS, Cat. Col. Japanese Archipel., p. 16, (*Agriotes*) (1879) (nom. nov.).—MIWA, Ins. Mats., III, No. 1, p. 49, (1929) (Sapporo, Towada, Nikkô and Chiuzenji).—Mushi, VI, No. 2, p. 73, (Ôyeyama and Kamikôchi).

=*lewisi* FLEUTIAUX, Bull. Mus. Hist. Nat. Paris, p. 358, (1900) (Japan).—SCHENKLING, in W. JUNK's Cat. Col. 88, Elat. 2, p. 476, (*Sericus*) (1927).

Hab.—Hokkaidô: Sapporo VII, 1928 (Y. MIWA); 5-VI, 1930 (H. KÔNO). Honshiu: Towada VII, 1927 (Y. MIWA); Chiuzenji 24-VII, 1881 (G. LEWIS); Wadatôge 1-VIII, 1881 (G. LEWIS). Kiushiu: Yakushima 30-IV, 1929 (S. ISSIKI).

Distr.—Europe, Siberia, Saghalien and Japan.

LEWIS reported this specics in 1894 as a variety of *Silesis musculus* CAND. There are two specimens in the author's collection, which were identified by G. LEWIS as *Adrastus patagiatus* LEW., but they have not pectinated claws, so these have been induced to this species.

Genus SERICUS ESCHSCHOLTZ

212. Sericus viridus LEWIS (Pl. VII, f. 5)

Ann. Mag. Nat. Hist., (6) XIII, p. 314, (*Sericosomus*) (1894) (Hitoyoshi, Oyama and Miyanoshita).—MIWA, Trans. Nat. Hist. Soc. Formosa, XIX, No. 103, p. 351, (1929) (Yakushima); Mushi, VI, No. 2, p. 73, (1933) (Kibune, Kurama and Kuzu).

Hab.—Honshiu: Miyanoshita V, 1880 (G. LEWIS); Kiga V, 1880 (G. LEWIS); Shimajima 10-VII, 1926 (?); Gifu 14-VI, 1925 (Y. MIWA); Hirayu in Hida 28-VIII, 1922 (M. SUZUKI). Shikoku: Mt. Tsurugi in Awa 18-VI, 1932 (K. ÔBAYASHI). Kiushiu: Hitoyoshi 4-V, 1881 (G. LEWIS); Mt. Kirishima 3-V, 1929 (S. ISSIKI); Yakushima 30-IV, 1929 (S. ISSIKI).

Distr.—Japan (Honshiu, Shikoku and Kiushiu).

Subfamily SYNAPTINAE FLEUTIAUX

Genus GLYPHONYX CANDÈZE

213. Glyphonyx illepidus CANDÈZE (Pl. VII, f. 6)

Mém. Soc. Sc. Liége (2) V, p. 31, (1973) (Japan).—LEWIS, Ann. Mag. Nat. Hist., (6) XIII, p. 315, (1894) (Natakusugawa, Tsumago, Hosokute and Shinkano).—MIWA, Trans. Nat. Hist. Soc. Formosa, XIX, No. 103, p. 351, (1929) (Okinawa); XXI, No. 116, p. 260, (1931) (Shuri).

var. **bicolor** CANDÈZE, Elat. nouv., (Mém. Soc. Sc. Liége) V, p. 66, (1893) (Japan).—LEWIS, Ann. Mag. Nat. Hist., (6) XVII, p. 373, (1896): teste.—MIWA, Mushi, VI, No. 2, p. 73, (1933) (Hanazono).

Hab.—Honshiu: Nara 29-VI, 1881 (G. LEWIS). Shikoku: Kôyadahira in Awa 3-VIII, 1913 (E. GALLOIS); Sasayama in Iyo VII, 1916 (S. MATSUMURA). Kiushiu: Obira 5-VIII, 1932 (T. SHIRAKI).

Distr.—Japan (Honshiu, Shikoku and Kiushiu) and Loo-Choo (Okinawa).

Genus SILESIS CANDÈZE

Key to the Species

1. The interstices of elytral striation punctured.....*musculus*
1'. The interstices of elytral striation markedly rugose.....*scabripennis*

214. Silesis musculus CANDÈZE (Pl. VII, f. 11)

Mém. Soc. Sc. Liége, (2) V, 31, (1873) (Japan).—LEWIS, Ann. Mag. Nat. Hist., (6) XIII, p. 315, (1894) (Hakone, Fukui, Tsumago and Numata).—MIWA, Trans. Nat. Hist. Soc. Formosa, XXIII, No. 125, p. 158, (1933) (Corea); Mushi, VI, No. 2, pp. 72 & 73, (1933) (Wakasugiyama, Minomo, Hakuba, Kamikôchi, Hanazono and Daisen).

var. **crocatus** CANDÈZE, Elat. nouv., V, p. 68, (1893) (Yezo).—LEWIS, Ann. Mag. Nat. Hist., (6) XVII, p. 337, (1896).

var. **flavicollis** FLEUTIAUX, Bull. Mus. Hist. Nat. Paris, VIII, p. 23, (1902) (Yezo).

var. **flavipennis** LEWIS, Ann. Mag. Nat. Hist., (6) XIII, p. 315, (1894) (Nakasendô).—FLEUTIAUX, Bull. Mus. Hist. Nat. Paris, VIII, p. 23, (1902) (Yezo).

Black, shining, with dense cinereous pubescence; antennae brownish; prothorax quadrilateral, convex, densely punctate, wtih the margin reddish, the posterior angle carinate; elytra, punctate-striate, the interstices convex, punctulate, the epipleura reddish; legs brown, 7-8 mm. One specimen which was collected by the author at Hiroshima agrees with the original description. This species widely distributed in Japan and very variable in colour and size, viz. most of them black with some fuscous tint, usually measured 6½-8½ mm; entirely black, measured 10 mm. (from Awa); prothorax densely black, elytra reddish

yellow, legs and antennae ferrugineous (*flavipennis*); pronotum and elytra yellowish, undersurface obscure (*flavicollis* and *crocatus*); black, elytra obscure brownish yellow, 9 mm (from Nikkô); pronotal posterior angle reddish only (from Tôkyô); prothorax dark reddish (from Kyôto), etc.

Hab.—Hokkaidô: Sapporo VII, 1909 (S. MATSUMURA); Kamuikotan 11–VIII, 1818 (M. SUZUKI); Lake Dôya to Mt. Usu VII, 1928 (Y. MIWA); Mt. Daisetsu 4–VIII, 1926 (H. KÔNO). Honshiu: Lake Towada 20–VII, 1927 (Y. MIWA); Nikkô IX, 1927 (Y. MIWA); Tôkyô 20–V, 1929 (K. KAMIYA); Usui-tôge 6–VIII, (G. LEWIS); Tsumago 24–VII, 1881 (G. LEWIS); Kamikôchi 10–VIII, 1930 (T. SHIRAKI); Mt. Norikura 27–VII, 1930 (K. KAMIYA); Kyôto VII, 1924 (Y. MIWA); Yokotani in Hiroshima 2–VII, 1927 (Y. MIWA). Kiushiu: Beppu VIII, 1913 (S. ARAKAWA); Kagoshima VII, (?).

(var. *flavipennis*) Hokkaidô: Sapporo VI, 1927 (Y. MIWA). Honshiu: Nikkô VI, 1880 (G. LEWIS); Hakone 17–IV, 1880 (G. LEWIS).

Distr.—Japan, Corea and Loo-Choo (Ôshima).

215. Silesis scabripennis LEWIS

Ann. Mag. Nat. Hist., (6) XIII, p. 315, (1894) (Yuyama).

=*harmandi* FLEUTIAUX, Bull. Mus. Hist. Nat. Paris, p. 358, (1900) (Japan); ibid. p. 23, (1902) (Yezo).

Hab.—Honshiu: Mt. Takao VII, 1913 (?).

Distr.—Japan (Hokkaidô, Honshiu and Kiushiu).

Genus ADRASTUS ESCHSCHOLTZ

216. Adrastus patagiatus LEWIS (Pl. VII, f. 12)

Ann. Mag. Nat. Hist., (6) XIII, p. 315, (1894) (Chiuzenji, Hakone, Wada-tôge and Junsai).

Three paratipes have been collected by G. LEWIS from Wadatôge and Chiuzenji, lacking pectinate claws of tarsus, so that the author has tranfered them to the synonymy of *Dolopius marginatus* L. The author collected an abundance of this small species in Sapporo, among pastural grass during the season from June to July.

Hab.—Hokkaidô: Sapporo VII, 1928 (Y. MIWA). Honshiu: Towada VII, 1927 (Y. MIWA).

Distr.—Japan (Hokkaidô and Honshiu).

Subfamily DENTICOLLINAE SCHENKLING

Genus DENTICOLLIS PILLER et MITTERPACHER

Key to the Species

1. Male variable in colour, viz. head black; thorax varying from black to reddish brown; elytra commonly testaceous, sometimes black or with the suture and outer margin black; the female usually black; scutellum not carinate in both sexes... ..... *versicolor*

1′. Body not vary much in colour; elytra usually reddish..... (2)

2. Head without two spots seen in *D. miniattis* CAND.; scutellum very strongly carinate; carina arched in outline, rather cornical, and well raised above the level of the elytra; elytra dull in colour..... *scutellaris*

2′. Scutellum longitudinally carinate in the middle; carina not arched; elytra bright red..... (3)

3. Head with two red spots as a rule, but sometimes absent; scutellum convex and longitudinally carinate in the middle..... *miniatus*

3′. Head without two red spots; scutellum not longitudinally carinate and showing a pyramid in anterior part..... *oculatus*

217. Denticollis versicolor LEWIS (Pl. VII, f. 13 ♀, 14 ♂)

Ann. Mag. Nat. Hist., (6) XIII, p. 316, (*Lepturoides*) (1894) (Chiuzenji).—FLEUTIAUX, Bull. Mus. Hist. Nat. Paris, VIII, p. 23, (*Lepturoides*) (1902) (Japan).

Hab.—Honshiu: Chiuzenji VI, 1880 (G. LEWIS); Kamikôchi 13–VII, 1927 (H. FURUKAWA).

Distr.—Japan (Honshiu).

218. Denticollis miniatus CANDÈZE (Pl. VII, f. 15 ♂, 16 ♀)

Not. Leyd. Mus., VII, p. 121, (*Lepturoides miniata*) (1885) (Japan).—LEWIS Ann. Mag. Nat. Hist., (6) XIII, p. 317, (*Lepturoides*) (1894) (Nikkô, Miyanoshita, Subashiri, Ichiuchi and Oyayama).—FLEUTIAUX, Bull. Mus. Hist. Nat. Paris, VIII, p. 23, (*Lepturoides*) (1902) (Japan).—MIWA, Mushi, VI, No. 2, p. 72, (1933) (Sobosan).

Hab.—Hokkaidô: Sapporo VII, 1928 (Y. MIWA). Honshiu: Subashiri 4–V, 1880 (G. LEWIS); Chiuzenji 7–VI, 1916 (E. GALLOIS); Furusato 6–V, 1928 (H. FURUKAWA); Ichinotani at Suma 2–VII, 1930 (M. SUZUKI). Shikoku: Mt. Tsurugi 14–VI, 1932 (K. ÔBAYASHI).

Distr.—Japan (Hokkaidô, Honshiu and Shikoku).

219. Denticollis scutellaris LEWIS (Pl. VII, f. 18 ♀, 19 ♂)

Ann. Mag. Nat. Hist., (6) XIII, p. 317, (*Lepturoides*) (1894) (Oyayama).

Hab.—Honshiu: Chiuzenji ♀ VII, 1880 (G. LEWIS). Shikoku: Mt. Tsurugi 14-VI, 1932 (K. ÔBAYASHI). Kiushiu: Oyayama ♀ IV, 1880 (G. EEWIS); 18-V, 1881 (G. LEWIS).

Distr.—Japan (Honshiu, Shikoku and Kiushiu).

220. Denticollis oculatus LEWIS (Pl. VII, f. 17 ♂)

Ann. Mag. Nat. Hist., (6) XII, p. 317, (*Lepturoides*) (1894) (Miyanoshita and Subashiri).

Hab.—Honshiu: Subashiri ♂ 4-V, 1880 (G. LEWIS). Kiushiu: Mt. Kirishima ♂ 3-V, 1929 (S. ISSIKI).

Distr.—Japan (Honshiu and Kiushiu).

II. Fauna of Saghalieu and Kuriles

Concerning the studies of *Elateridae* from these faunistic regions, S. MATSUMURA made a first report in 1911, who published a paper about the insect fauna of Saghalien, in which he recorded 11 species from Saghalien with descriptions of new species. Next, H. KÔNO and K. TAMANUKI reported the Coleoptera from north Saghalien (northern part from the latitude 50° north) in 1926, in which they mentioned an aberant form of *Corymbites boeberi* GERMAR and *C. puncticollis* MOTSCHULSKY. In 1927, Y. MURASE reported *Elater ainu* LEWIS from Saghalien in his whork of a list of Saghalien Coleoptera collected in 1924. In the same year, K. YOKOYAMA and T. KANO reported a list of Coleoptera from South Saghalien, in which two Elaterid-species new to the fauna are included, while K. TAMANUKI described an addition to this list and has introduced *Adelocera conspersa* GYLLENHAL from Saghalien.

The author has reported some new or revised species from Saghalien and the Kuriles from 1927 to 1928, and in 1929, he issued a paper about the *Elateridae* of Saghalien and the Kuriles, in which the species totaling 35 including one new species are systematically enumerated.

In 1933, the author has studied about the *Elateridae* in the collection of Kiushiu Imperial University, through the kindness of T. ESAKI, and reported 9 species from Saghalien, in which one species as *Agriotes fuscicollis* MIWA was mentioned as new to the fauna.

Since then he has studied again about these species from Saghalien and the Kuriles, and found some species must be revised as new to the fauna. They are as follows:

Adelocera sachalinesis MIWA=*A. fasciata* LINNAEUS

Elater orientalis and *ainu* (non LEW.) MIWA (1929)=*E. pomorum* HERBST

Hypnoidus (*Zorochrus*) *curatus* (non CAND.) MIWA (1929)=*Zorochrus tutus* LEWIS

Pittonotus aenescens, flavipennis and *sachalinensis* MIWA=(transfered to *Pheletes*)

Corymbites (*Actenicerus*) *kurilensis* MIWA=*C. affinis* PAYKULL, var.

Corymbites (*Neoplistilophus*) *dilatatus* MIWA=(new to Saghalien)

Corymbites (*Selatosomus*) *sachalinensis* MIWA=*C. impressus* FABRICIUS, var.

Denticollis dilutiangulus (non MOTSCH.) MIWA (1928)=*Denticollis linearis* LINNAEUS

In total, the number of species reported from Saghalien and the Kuriles is summed up to 37 in the present investigation as is shown in the following table with their geographical distribution.

The Distribution List of the Species Indigenous to Saghalien and Kuriles

Species \ Localities	1. Europe	2. Siberia and Amur	3. Saghalien	Kuriles: 4. Shimshu	5. Paramushir	6. Urrup	7. Etorup	8. Kunashiri	9. Shikotan	Japan: 10. Hokkaido	11. Honshiu	12. Shikoku	13. Kiushiu	14. Corea	Other Localities
1. *Adelocera conspersa* GYLLENHAL	×	×	×												
2. *A. fasciata* LINNAEUS	×		×												
3. *Elater nigrinus* HERBST	×	×	×												N. America
4. *E. dilutipes* MOTSCHULSKY		×	×												
5. *E. sanguinolenthus* SCHRANK	×	×	×					×		×					
6. *E. sanguineus* LINNAEUS	×	×	×												N. Africa
7. *E. pomorum* HERBST	×	×	×				×								Caucasus, Turkestan
8. *E. shakotanensis* MIWA									×						
9. *E. doii* MIWA								×							
10. *E. etorupensis* MIWA							×								
11. *Zorochrus tutus* LEWIS			×								×				
12. *Paracardiophorus pullatus* CANDÈZE			×							×	×	×	×	×	
13. *Melanotus castanipes* PAYKULL	×	×	×							×	×				Caucasus, Asia-minor, N. America

Species \ Localities	1	2	3	4	5	6	7	8	9	10	11	12	13	14	Other Localities
14. *M. legatus* CANDÈZE			×					×		×	×	×	×	×	Loo-Choo
15. *Limonius parallelus* MOTSCHULSKY		×	×												
16. *Pheletes aenescens* MIWA			×								×				
17. *P. flavipennis* MIWA			×												
18. *P. sachalinensis* MIWA			×												
19. *Harminius singularis* LEWIS			×					×		×	×				
20. *H. (Diacanthous) undosus* MIWA			×							×	×				
21. *Athous (Grypathous) inornatus* LEWIS			×							×					
22. *Corymbites (Anostirus) boeberi* GERMAR		×	×												
23. *C. (Actenicerus) affinis* PAYKULL	×	×	×		×										
24. *C. (Neopristilophus) dilatatus* MIWA			×							×					
25. *C. (Selatosomus) impressus* FABRICIUS	×		×												
26. *C. (S.) puncticollis* MOTSCHULSKY			×							×	×				
27. *C. (S.) rugosus* GERMAR	×	×	×							×					Araska
28. *C. (S.) baeri* KUSCHAKEWITSCH		×	×												
29. *C. (Paranomus) mundulus* LEWIS			×							×	×		×		
30. *Prosternon tesselatum* LINNAEUS	×	×	×											×	N. America
31. *Hypoganus suzuyamanus* MATSUMURA			×												
32. *Yezodima convexum* MIWA			×	×		×	×			×					
33. *Agriotes persimilis* LEWIS			×			×	×	×	×	×	×				
34. *A. sericeus* CANDÈZE									×	×	×				
35. *A. fuscicollis* MIWA			×							×					
36. *Dolopius marginatus* LINNAEUS	×	×	×							×	×		×		
37. *Denticollis linearis* LINNAEUS	×	×	×					×							Asia-minor, Caucasus, Turkestan
	13	15	32	1	1	1	5	5	5	16	11	2	4	3	
				13						20					

The author has taken here the affinity of percentage between the any fauna of these two regions and each of neibouring regions, for the shake of convenience to see the affinity of each fauna, as follows:

	Saghalien
Siberia	47
Hokkaidô	44
Europe	40
Honshiu	31
Kuriles	25
Kiushiu	9
Corea	7
Shikoku	3

	Kuriles
Saghalien	62
Hokkaidô	46
Honshiu	39
Siberia	31
Europe	31
Corea	8
Shikoku	8
Kiushiu	8

Then you will see the species having the most close affinity to Siberia, Europe and North Japan, which may be perceived that the fauna of Saghalien and the Kuriles are included in Eurosiberian subregion of Palaearctic, with no exception.

ELATERIDAE OF SAGHALIEN AND KURILES

Subfamily AGRYPNINAE FLEUTIAUX

Genus ADELOCERA LATREILLE

Key to the Species

1. Pronotal posterior angles each with an acute carina.....*conspersa*
1′. Pronotal posterior angles without carina.....*fasciata*

1. Adelocera conspersa GYLLENHAL

Ins. Suec., I, p. 377, (*Elater*) (1808) (Sweeden).—CANDÈZE, Mon., I, p. 54, t. I, f. 12, (1857) (North Europe and Siberia).—REITTER, Fauna Germ., III, p. 213, (1911) (Germany).—KUHNT, Illustr. Best.-Tab. Käf. Deutschl., p. 620, f. 28, a-c, (1913) (Germany).—JAKOBSON, Žuki Rossiji, t. 36, f. 11, 1905–16, (1913) (North Europe and Siberia).—TAMANUKI, Monthl. Mag. Zool. Soc. Tôkyô, XXXIX, No. 460, p. 78, (1927) (Saghalien).

Hab.—South Saghalien: Ichinosawa 9-VII, 1927 (Y. MIWA).

Distr.—North Europe, Siberia and Saghalien.

2. Adelocera fasciata LINNAEUS

Syst. Nat., ed. 10, I, p. 406, (*Elater*) (1758) (Europe).—Olivier, Ent., II, Nr. 31, p. 31, t. 1, f. 5; t. 5, f. 46 (*Elater*), (1790).—FABRICIUS, Syst. El., II, p. 229, (1801). —CANDÈZE, Mon., I, p. 53, t. 1, f. 10, (1857).—REITTER, Fauna Germ., III, p. 213, t. 113, f. 14, (1911).—KUHNT, Illustr. Best.-Tab. Käf. Deutschl., p. 621, (1913). =*sachalinensis* MIWA, Ins. Mats., II, No. 1, p. 13, pl. I, f. 1, (1927) (Saghalien); Monthl. Mag. Zool. Soc. Tôkyô, XLI, No. 492, p. 443, (1929): nota.

Hab.—Saghalien: Nairo (MIWA, ibid., 1927); Konuma 10-VII, 1927 (Y. MIWA).

Distr.—Europe and Saghalien.

The species described by the author from Saghalien with a naked body, namely, the scales composed of patterns have mostly come off the elytra. The characteristic ∞ shaped-fasia of scales was not recognizable until the second specimen has been obtained. The latter is a good species and the author has identified this as *A. fasciata* L., to compared with the European species.

Subfamiiy ELATERINAE C. SCHAUFUSS

Genus ELATER LINNAEUS

Key to the Species

1. Elytra black.....(2)

1′. Elytra red ..... (3)
2. Body relatively elongate; legs commonly black ..... *nigrinus*
2′. Body rather wider; legs reddish ..... *dilutipes*
3. Elytra with a longitudinal black stripe ..... *sanguinolenthus*
3′. Elytra without stripe ..... (4)
4. Pronotum canaliculate in the middle; elytra cinnabar red ..... *sanguineus*
4′. Pronotum not canaliculate; elytra ferrugineous or obscure red ..... (5)
5. Elytra over thrice as long as prothorax ..... *etorupensis*
5′. Elytra two and half times as short as prothorax ..... (6)
6. Pubescence brownish black on the prothorax and bright reddish brown on the elytra; legs black except the tarsi reddish ..... *pomorum*
6′. Ashy grey or griseous pubescent; legs dark brown or testaceous ..... (7)
7. Ashy grey pubescent, prothorax widest at the base, gradually narrowing anteriorly, with the sides straight ..... *doii*
7′. Griseous pubescent; prothorax with the sides arcuate, somewhat rounded; legs testaceous ..... *shakotanensis*

3. Elater nigrinus HERBST

in FÜESSLY, Arch. Insectengesch., V, p. 114, (1784) (Europe).—CANDÈZE, Mon., II, p. 475, (1859) (Europe, Siberia and North America).—REITTER, Ent. Nachr., XV, p. 116, (1889): in table; Fauna Germ., III, p. 239, t. 116, f. 14, (1911).—C. SCHAUFUSS, in CALWER, Käferb., ed. 6, 1907–16, p. 656, (1911).—KUHNT, Illustr. Best.-Tab. Käf. Deutschl., p. 634, (1913).—MATSUMURA, Journ. Agr. Col., Tôhoku Imp. Univ., Sapporo, IV, p. 120, (1911) (Saghalien).

Hab.—Saghalien: Toyohara 13-VII, 1922 (T. ESAKI); Tonnai 10-VII, 1927 (Y. MIWA); Horo 23-VI, 1930 (M. HORI).

Distr.—Europe, Siberia, Amur, Saghalien and North America.

4. Elater dilutipes MOTSCHULSKY

SCHRENK's Reisen Amurl., p. 111, t. 7, f. 22, (1860) (Amur).—REITTER, Ent. Nachr., XV, p. 116, (1889) (Amur).—MIWA, Monthl. Mag. Zool. Soc. Tôkyô, XLI, No. 492, p. 444, (1929) (Saghalien).

Hab.—Saghalien: Toyohara 23-VII, 1922 (T. ESAKI); Tonnai 10-VII, 1927 (Y. MIWA); Tomarikishi at Shisuka 28~30-VII, 1930 (T. SHIRAKI).

Distr.—Amur and Saghalien.

5. Elater sanguinolenthus SCHRANK

vide fauna of Japan.

Hab.—Saghalien: Tonnaicha (MATSUMURA, Journ. Agr. Col., Tôhoku Imp. Univ., Sapporo IV, 1, p. 120, 1911); Tei to Maoka 19-VII, 1930 (T. SHIRAKI). Kuriles: Fushikotan in Kunashiri Is. VIII. 1927 (K. DOI).

Distr.—Europe, Siberia, Saghalien, Kuriles and Japan (Hokkaidô).

6. Elater sanguineus LINNAEUS

Syst. Nat., ed. 10, I, p. 405, (1758) (Europe).—OLIVIER, Ent., II, Nr. 31, p. 40, t. 1, f. 7; t. 5, f. 48a, (1790).—FABRICIUS, Syst. Eleuth., II, p. 233, (1801).—CANDÈZE, Mon., II, p. 442, (1859) (Europe, North Africa and Western Asia).—REITTER Ent. Nachr., XV, p. 110, (1889). in table; Fauna Germ., III, p. 238, (1911).—C. SCHAUFUSS, in CALWER, Käferb., ed. 6, 1907–16, p. 653, t. 19, f. 1, (1911).—KUHNT, Illustr. Best.-Tab. Käf. Deutschl., p. 632, fig. 66, 69a, (1913).—MATSUMURA, Journ. Agr. Col., Tôhoku Imp. Univ., Sapporo, IV, p. 120, (1911) (Saghalien).

Hab.—Shiraraka (MATSUMURA, ibid., 1911)

Distr.—Europe, Siberia, North Africa and Saghalien?

One specimen preserved in the Entomological Institute, Hokkaidô Imperial University, agrees with the description and figure of *E. sanguineus* in the cited literature, but it was not labelled as "Shiraraka." This seems to be European species and the one from Saghalien may be thought to have been induced to *E. pomorum* HERBST.

7. Elater pomorum HERBST

in FÜESSLY, Arch. Insektengesch., V, p. 112, (1784) (Europe).—CANDÈZE, Mon., II, p. 446, (1859).—Schenkling, Junk's Col. Cat., 80, p. 150, (1925) (Europe, Siberia, Caucasus and Turkestan).

=*ainu* (non LEWIS) MIWA, Monthl. Mag. Zool. Soc. Tôkyô, XLI, p. 444, (1929) (Saghalien and Kuriles).

=*orientalis* (non LEWIS) MIWA, ibid., (Kuriles).

Hab.—Saghalien: Konuma 6-VII, 1927 (Y. MIWA); Tonnai 10-VII, 1927 (S. MINOWA); Takinosawa 8-VII, 1930 (C. WATANABE); Kaibatô 20~25-VII, 1930 (T. SHIRAKI); Tomarikishi at Shisuka 28~30-VII, 1930 (T. SHIRAKI). Kuriles: Shakotan in Shikotan Is. VIII, 1927 (K. DOI); Kamoikotan in Etorup Is. 20-VII, 1927 (K. DOI).

Distr.—Europe, Caucasus, Turkestan, Siberia, Saghalien and Kuriles.

8. Elater shakotanensis MIWA

Ins. Mats., II, No. 1, p. 16, pl. I, f. 7, (1927) (Kuriles).

Black, with griseous pubescence. Head convex, evenly and closely punctured, with a feeble fovea in front of each eye; frontal carina well marked. Prothorax

convex, somewhat azureous shining, with the sides slightly rounded, narrowed anteriorly, rather parallel posteriorly and prolonged in the same direction to the end of the hind angles, very finely and sparsely punctured on the disk of pronotum, but rather densely on the lateral part; hind angles acuminate behind, rugosely punctured; scutellum minutely but visibly punctulate, with a median longitudinal carina. Elytra brownish yellow but somewhat infuscate at the sutural part, with punctured striae, the interstices convex, densely and coarsely punctured. Antennae fuscous, the second and third joints small, the third obconical and twice longer than the former. Legs brownish yellow.

Length: 8½ mm. Width: 2¼ mm.

Hab.—Shikotan Is.: Shakotan VII, 1925 (K. DOI).*

Distr.—Kuriles.

9. Elater doii MIWA

Ins. Mats., II, No. 1, p. 17, pl. I. f. 9, (1927) (Kuriles).

Black, shining, with cinereous pubescence. Head convex, nearly vertical, densely punctured; frontal carina well marked. Prothorax convex, narrowest at the anterior rim, gradually widening to the posterior angles, with the sides very slightly arched so as to be nearly straightened, very finely and rather sparsely punctured on the pronotal disk, but rather closely on the lateral parts; hind angles rather acuminate behind, acutely carinate, with rugose punctation on the surface; scutellum nearly elliptical, coarsely punctured. Elytra red but not very bright, punctate-striate, the interstices convex, the first to fifth nearly the same in width and broader than those of the outside, being very densely but coarsely and rather feebly punctured. Antennae black, the three basal joints obscure brown and shining. Legs fuscous, the tarsi paler.

Length: 12 mm. Width: 2½ mm.

Hab.—Kunashiri Is: Nikishiro VII, 1925 (K. DOI).*

Distr.—Kuriles.

10. Elater etorupensis MIWA

Monthl. Mag. Zool. Soc. Tôkyô, XLI, No. 492, pp. & 454, (1929) (Kuriles).

Black, a little shining, with fine brownish yellow pubescence. Head densely but unevenly punctured. Prothorax widest at the base, gradually narrowing anteriorly, punctured like that of the head on the lateral part of the pronotum, but having much sparser and finer punctures on the disk; hind angles acuminate behind and turned outwards, each with a distinct carina; scutellum black, elongate, rather obtuse behind, coarsely and unevenly punctulate. Elytra

* Holotype is deposited in the Entomological Institute, Hokkaidô Imperial University.

reddish yellow, about three and one fourth times as long as the prothorax, punctate-striate, but the striation somewhat obliterated by a coarse and rather rugose puntation on the interstices. Antennae fuscous, the second and third joints smaller than others, the former nearly globose and the latter conical. Legs dark brown, the tarsi brownish yellow.

Length: 9 mm. Width: 2⅔ mm.

Hab.—Etorup Is.: Naibo 18-VIII, 1927 (K. DOI).

Distr.—Kuriles.

Subfamily HYPNOIDINAE FLEUTIAUX

Genus ZOROCHRUS C. G. THOMSON

11. Zorochrus tutus LEWIS

vide fauna of Japan, p. 91.

Hab.—Saghalien: Motodomari 13-VIII, 1914 (S. ISSIKI).

Distr.—Japan (Honshiu) and Saghalien.

Subfamily ESTHESOPINAE FLEUTIAUX

Genus PARACARDIOPHORUS SCHWARZ

12. Paracardiophorus pullatus CANDÈZE

vide fauna of Japan, p. 95.

Hab.—Saghalien: Ichinosawa (YOKOYAMA et KANO, Monthl. Mag. Zool. Soc. Tôkyô, XXXVII, No. 459, p. 20, 1927).

Distr.—Japan, Corea and Saghalien.

This species was reported from Saghalien by K. YOKOYAMA and T. KANO, but the specimen has not been examined by the author. This may also usually be thought as *Cardiophorus vulgaris* MOTSCH., although there is a possibility of proving to be *P. pullatus* from the same locality.

Subfamily MELANOTINAE JAKOBSON

Genus MELANOTUS ESCHSCHOLTZ

Key to the Species

1. Antennae with the second and third joints smaller than others, and the latter slightly longer than the former, the fourth longer than the preceding two joints united together; front foveolate in the middle.....*castanipes*

1′. Antennae with the third joint nearly half as long as the second and fourth united together; front not foveolate ..... *legatus*

13. Melanotus castanipes PAYKULL

vide fauna of Japan, p. 99.

Hab.—Saghalien: Solowiyofka (MATSUMURA, Journ. Col. Agr., Tôhoku Imp. Univ., Sapporo, p. 121, 1911, as *M. carinatus*); Kaizuka (YOKOYAMA and KANO, cited the same locality in 1927); Kawakami, Ichinosawa, Solowiyofka and Ôdomari (MIWA, Ins. Mats., II, p. 112, 1927; Monthl. Mag. Zool. Soc., p. 446, 1929); Toyohara and Hôsin-sandô (MIWA, Mushi, VI, No. 1, p. 29, 1933).

Distr.—Europe, Caucasus, Asia-minor, Siberia, Saghalien, Japan (Hokkaidô and Honshiu), Canada, U. S. A. and Mexico.

14. Melanotus legatus CANDÈZE

vide fauna of Japan, p. 102.

Hab.—Kunashiri Is.: Fushikotan (MIWA, Ins. Mats., II, p. 112, 1927).

Distr.—Kuriles, Japan, Corea and Loo-Choo.

Subfamily ATHOINAE C. SCHAUFUSS

Genus LIMONIUS ESCHSCHOLTZ

15. Limonius parallelus MOTSCHULSKY

SCHRENK's Reisen Amurl., II, p. 111, t. 7, f. 23, (1860) (Dauria and Amur).—REITTER, Wien. Ent. Zeit., XIV, p. 256, (1895) (Baikal); Best.-Tab., 56, p. 18, (1905).—MIWA, Monthl. Mag. Zool. Soc. Tôkyô, XLI, No. 492, p. 448, (1929) (Saghalien).

Hab.—Saghalien: Pirewo, Ichinosawa, Otani and Konuma (MIWA, ibid., 1929); Kiminai 12-VII, 1924 (K. TAMANUKI); Horo 25-VI, 1930; 7-VII, 1932 (K. TAMANUKI); Tomarikishi at Shisuka 25~30-VII, 1930 (T. SHIRAKI).

Distr.—Amur, Baikal, Dauria and Saghalien.

Genus PHELETES KIESENWETTER

Key to the Species

1. Elytra black, aenescent ..... *aenescens*
1′. Elytra testaceous ..... (2)
2. Prothorax more or less constricted at the sides; scutellum black and oval ..... *flavipennis*

2′. Prothorax rather arched at the sides; scutellum brownish and nearly circular... ..... *sachalinensis*

16. Pheletes aenescens MIWA

vide fauna of Japan, p. 107.

Hab.—Konuma 8-VII, 1927 (Y. MIWA).

Distr.—Saghalien and Japan (Chiuzenji).

17. Pheletes flavipennis MIWA

Ins. Nats., III, No. 1, p. 41, pl. I, f. 5, (*Pittonotus*) (1928) (Saghalien).

Black, shiny, with fine short griseous pubescence. Head rather flattened, nearly vertical in front, densely punctured. Prothorax convex, narrowest and somewhat rounded at the anterior part, gently widening to the middle, then suddenly widened posteriorly and seems to be constricted at that portion, with punctation like that of the head on the lateral part of pronotum, but rather finer and somewhat sparser on the disk; hind angles relatively large and acute, with an acute carina; scutellum nearly elliptical. Elytra rather testaceous, with fine punctured striae, the interstices not raised, densely but unevenly punctured. Antennae black, distinctly serrate. Legs slender, concolorous with the elytra.

Length: 9 mm. Width: 2½ mm.

Hab.—Konuma 8-VII, 1927 (Y. MIWA).

Distr.—Saghalien.

18. Pheletes sachalinensis MIWA

Ins. Mats., III, No. 1, p. 40, pl. I, f. 4, (*Pittonotus*) (1928) (Saghalien).

Black, somewhat aenescent, with fine short fulvous pubescence. Head flattened, nearly vertical in front, densely and evenly punctured on the whole surface. Prothorax convex, narrowest at the anterior border, gradually widening to the base punctate like that of the head on the pronotal disk, but much densely and finely set on the lateral part, with a yellowish tint on the anterior part of the propleuron; hind angles acuminate behind and turned outwards, with a conspicuous carina on each of them; scutellum fuscous, nearly circular. Elytra pale brownish yellow, with fine punctured striae, the interstices densely but coarsely punctured. Antennae dark brown, the basal joint reddish. Legs slender, concolorous with the elytra.

Length: 10½ mm. Width: 3 mm.

Hab.—Tonnai 10-VII, 1927 (Y. MIWA); Konuma 13-VII, 1931 (K. TAMANUKI).

Distr.—Saghalien.

Genus **HARMINIUS** FAIRMAIRE

Subgenus **HARMINIUS** s. str.

19. Harminius singularis LEWIS

vide fauna of Japan, p. 108.

Hab.—Saghalien: Tonnai (YOKOYAMA et KANO, Monthl. Mag. Zool. Soc. Tôkyô, XXXIX, p. 20, 1927). Kuriles: Tofutsu in Kunashiri Is. 6-VII, 1925 (K. DOI).

Distr.—Japan (Hokkaidô and Honshiu), Kuriles and Saghalien?

Subgenus **DIACANTHOUS** REITTER

20. Harminius (Diacanthous) undosus LEWIS

vide fauna of Japan, p. 108.

Hab.—Saghalien: Konuma and Kiminai (MIWA, Ins. Mats., II, p. 135, 1928).

Distr.—Japan (Hokkaidô and Honshiu) and Saghalien.

Genus **ATHOUS** ESCHSCHOLTZ

Subgenus **GRYPATHOUS** REITTER

21. Athous (Grypathous) inornatus LEWIS

vide fauna of Japan, p. 114.

Hab.—Ôdomari, Tonnai, Toyohara, Ichinosawa, Konuma, Kaizuka and Kiminai (MIWA, Monthl. Journ. Zool. Soc. Tôkyô, XXXIX, p. 447, 1929).

Distr.—Saghalien and Japan (Hokkaidô).

Subfamily **CORYMBITINAE** SCHENKLING

Genus **CORYMBITES** LATREILLE

Subgenus **ANOSTIRUS** C. G. THOMSON

22. Corymbites (Anostirus) boeberi GERMAR

Ins. Spec. Nov., p. 51, (*Elater*) (1824) (Siberia).—CANDÈZE, Mon., IV, p. 100, (1863) (Siberia).

var. **fuscus** KÔNO et TAMANUKI, Monthl. Journ. Zool. Soc. Tôkyô, XXXVIII, No. 455, p. 281, (1986) (North Saghalien: Nuio).

var. **immaculatus** MIWA, Ins. Mats., II, No. 3, p. 133, (1928) (South Saghalien: Tonnai).

Hab.—South Saghalien: Takinosawa 9-VII, 1930 (C. WATANBE) (var. immaculatus).

Distr.—Siberia and Saghalien.

Subgenus **ACTENICERUS** KIESENWETTER

23. Corymbites (Actenicerus) affinis PAYKULL

Fauna Suec., III, p. 12, (*Elater*) (1800) (Europe).—CANDÈZE, Mon., IV, p. 119, (1863) (Europe and Siberia).

var. **kurilensis** MIWA, Ins. Mats., II, No. 3, p. 144, pl. VI, f. 23, (1928) (Kuriles).

Black, shiny, with fine short fulvous pubescence. Head excavated triangularly between the eyes, densely and unevenly punctured. Prothorax convex, narrowed anteriorly and gradually widening posteriorly, well margined at the sides, very finely punctured on the pronotum, with a feeble and rather obliterated longitudinal channel in the middle; hind angles rather acuminate and distinctly carinate; scutellum convex, nearly elliptical, with a feeble longitudinal impression in the middle. Elytra finely punctate-striate, the interstices rather flattened, feebly and rather rugosely punctured. Antennae black, serrate from the third joint. Legs fuscous, the tarsi paler, the claws reddish.

Length: $10\frac{1}{4}$ mm. Width: $2\frac{4}{5}$ mm.

Hab.—Kuriles: Kujirawan, Nasauki, Ruisan and Arakata in Paramushir Is. (MIWA, ibid., 1928). Saghalien: Mt. Suzuyadake 11-VII, 1930 (C. WATANABE); Shiretori 20-VIII, 1931 (K. TAMANUKI).

Distr.—Europe, Siberia, Saghalien and Kuriles.

Subgenus **NEOPRISTILOPHUS** BUYSSON

24. Corymbites (Neopristilophus) dilatatus MIWA

vide fauna of Japan, p. 118.

Hab.—Saghalien: Suzuyadake 11-VII, 1930 (C. WATANABE).

Distr.—Saghalien and Japan (Hokkaidô).

Subgenus **SELATOSOMUS** STEPHENS

Key to the Species

1. Pronotum, scutellum and elytral striae covered with long yellowish gray pubescence; elytra with four elevated interstices.....*baeri*
1′. Elytra moderately punctate-striate.....(2)

2. Cinereous pubescent; pronotum elongate, rather depressed and finely canaliculate; elytra black 13½ mm.....*impressus*
2′. Elytra metallic green.....(3)
3. Pronotum with a median longitudinal smooth line; elytra rugose.....*rugosus*
3′ Pronotum with a feeble median canaliculation; elytra regularly punctate-striate... .....*puncticollis*

25. Corymbites (Selatosomus) impressus FABRICIUS

Ent. Syst., I, 2, p. 223, (*Elater*) (1792) (Europe); Syst. Eleuth., II, p. 239, (1801). —CANDÈZE, Mon., IV, p. 160, (1863).

var. **sachalinensis** MIWA, Ins. Mats., II. No. 3, p. 141, Pl. V, f. 17, (1928) (Saghalien).

Black, with a metallic lustre, finely cinereous pubescent. Head slightly excavated, densely and rather rugosely punctured. Prothorax convex, with a feeble longitudinal median channel, narrowest at the anterior border, gradually wedening to the base, slightly arcuate at sides, very closely punctured on the lateral part of the pronotum, but much sparsely and rather finely on the disk; hind angles obtusely acuminate behind and slightly turned outwards, with an acute carina; scutellum concave, nearly circular, with minute punctation. Elytra finely punctate-striate, the interstices rather flattened, feebly punctured and rather transversely rugose on the dorsum, with the outer margin narrowly expanded and reflexed. Antennae and legs dark red; claws reddish.

Length: 13½ mm. Width: 4 mm.

Hab.—Saghalien: Ichinosawa and Kiminai (MIWA, ibid., 1928).

Distr.—Europe and Saghalien.

26. Corymbites (Selatosomus) puncticollis MOTSCHULSKY

vide fauna of Japan, p. 120.

Hab.—Saghalien: Solowiyofka and Korsakoff (MATSUMURA, Journ. Col. Agr., Tôhoku Imp. Univ., IV, p. 123, 1911): Zwimov (KÔNO et TAMANUKI, Monthl. Mag. Zool. Soc. Tôkyô, XXXVIII, p. 282, 1926); Konuma 9-VII, 1927 (Y. MIWA); 11-VII, 1930 (C. WATANABE). Kuriles: Shakotan in Shikotan Is. VII, 1925 (K. DOI).

Distr.—Saghalien, Kuriles and Japan (Hokkaidô and Honshiu).

27. Corymbites (Selatosomus) rugosus GERMAR

vide fauna of Japan, p. 120.

Hab.—Saghalien: Tonnaicha (MATSUMURA, Journ. Col. Agr., Tôhoku Imp. Univ.

Sapporo, IV, p. 122, 1911); Shisuka (MIWA, Ins. Mats., II, p. 140, 1928); Tonnai 10-VII, 1927 (Y. MIWA).

Distr.—Europe, Siberia, Arasuka, Saghalien and Japan (Hokkaidô).

28. Corymbites (Selatosomus) baeri KUSCHAKEWITSCH

Horae Soc. Ent. Ross., I, p. 55, t. 1, f. 1-3, (1861) (East Siberia).

=*elevatus* MATSUMURA, Journ. Col. Agr., Tôhoku Imp. Univ., Sapporo, IV, p. 291, (1911) (Saghalien).—MIWA, Ins. Mats., II, No. 3, p. 140, (1928): teste.

Hab.—Saghalien: Solowiyofka (MATSUMURA, ibid., 1911).

Distr.—East Siberia and Saghalien.

Subgenus PARANOMUS KIESENWETTER

29. Corymbites (Paranomus) mundulus LEWIS

vide fauna of Japan, p. 123.

Hab.—Saghalien: Shisuka (MIWA, Monthl. Mag. Zool. Soc. Tôkyô, p. 449, 1929).

Distr.—Saghalien and Japan (Hokkaidô, Honshiu and Kiushiu).

Genus PROSTERNON LATREILLE

30. Prosternon tessellatum LINNAEUS

Syst. Nat., ed. 10, I, p. 406, (*Elater*) (1758) (Europe).—JAKOBSON, Žuki Rossiji, 1905-16, t. 38, f. 21, (*Ludius*) (1913).—MATSUMURA, Journ. Agr. Col., Tôhoku Imp. Univ., Sapporo, IV, 1, p. 122, (*Corymbites*) (1911) (Saghalien).—MIWA, Trans. Nat. Hist. Soc. Formosa, XXIII, No. 125, p. 158, (1933) (Corea).

=*horosericeum* OLIVIER, Ent., II, Nr. 31, p. 27, t. 3, f. 33, t. 7, f. 69, (*Elater*) (1790) (Europe).—FABRICIUS, Ent. Syst., I, 2, p. 222, (*Elater*) (1792); Syst. Eleuth., II, p. 228, (*Elater*) (1801).—CANDÈZE, Mon., IV, p. 148, (*Corymbites*) (1863) (Europe and Siberia).—C. SCHAUFUSS, in CALWER, Käferb., ed. 6, p. 634, t. 19, f. 21, 1907-16, (1911).—KUHNT, Illustr. Best.-Tab. Käf. Deutschl., p. 624, (1913).

Hab.—Saghalien: Solowiyofka (MATSUMURA, ibid., 1911); Tonnai (MIWA, Monthl. Mag. Zool. Soc. Tôkyô, p. 450, 1929).

Distr.—Europe, Siberia, Corea, Saghalien and North America (after W. JUNK's Catalogue, 1927).

Genus HYPOGANUS KIESENWETTER

31. Hypoganus suzuyamanus MATSUMURA

Journ. Col. Agr. Tôhoku Imp. Univ., Sapporo, IV, 1, p. 121, (*Agriotes*) (1911) (Saghalien).

Black, shining. Head coarsely and unevenly punctured, with a slight triangular impression and a pair of foveae between the eyes. Pronotum convex, very finely and sparsely punctured, with the sides well margined and arched; hind angles rather short, obtuse behind, somewhat turned outwards, with a distinct carina; scutellum rather elliptical, hardly punctured, more or less yellowish pubescent. Elytra rather dilated posteriorly, punctate-striate with the external margin narrowly expanded and reflexed, the interstices flattened, very finely and much sparsely punctured, rather obscurely and feebly rugose. Antennae castaneous brown, the basal three joints paler, the second nearly globose and slightly shorter than the third, from the fourth to tenth together forming a serration, the terminal one nearly spindle shaped. Under-surface brownish black and pubescent. Legs castaneous brown or reddish brown or sometimes dark brown, the tarsi yellowish brown, the claws yellowish.

Length: 9 mm. Width: 2 mm.

Hab.—Suzuyama (MATSUMURA, ibid., 1911) (Horotype in Col. Sapporo); Kaizuka, Kiminai and Konuma (MIWA, Monthl. Mag. Zool. Soc. Tôkyô, p. 450, 1929); Takinosawa 8-VII, 1930 (C. WATANABE); Suzuyadake 11-VII, 1930 (C. WATANABE).

Distr.—Saghalien.

Subfamily DIMINAE SCHENKLING

Genus YEZODIMA MIWA

32. Yezodima convexum MIWA

vide fauna of Japan, p. 127.

Hab.—Kuriles: Shana in Etorup Is.; Jôgasaki, Bettobu and Murakamizaki in Shimshu Is.; Kofuneminato and Tokotan in Urrup Is. (MIWA, Monthl Mag. Zool. Soc. Tôkyô, p. 451, 1929). Saghalien: Kaihyôtô (Seal island) (MIWA, ibid.).

Distr.—Japan (Hokkaidô), Kuriles and Saghalien.

Subfamily LUDIINAE FLEUTIAUX

Genus AGRIOTES ESCHSCHOLTZ

Key to the Species

1. Dusky brown; pronotum infuscate on the disk, with the margins reddish brown; elytra reddish brown, but distinctly darker on the interstices from the second to fifth.....*fuscicollis*

1′. Body black; elytra testaceous.....(2)

2. Body robust; thorax shorter and wider; elytral suture infuscate.....*persimilis*

2′. Body slender; thorax longer and narrower; elytra wholly testaceous.....*sericeus*

33. Agriotes persimilis LEWIS

vide fauna of Japan, p. 133.

Hab.—Kuriles: Notoro and Shakotan in Shikotan Is.; Tomari and Tofutsu in Kunashiri Is.; Kamoikotan, Bettobu and Naibo in Etorup Is. (MIWA, Ins. Mats., III, No. 1, p. 44, 1928). Saghalien: Ichinosawa, Bannosawa, Kaizuka, Konuma, Tonnai and Kiminai (MIWA, ibid.); Hôshin-sandô and Kyûshin-sandô (MIWA, Mushi, VI, No. 1, p. 30, 1933); Sakaehama 12-VII, 1930 (C. WATANABE); Towada 17-VII, 1930 (M. HORI); Kaibatô 20~25-VII, 1930 (T. SHIRAKI).

Distr.—Japan (Hokkaidô and Honshiu), Kuriles and Saghalien.

34. Agriotes sericeus CANDÈZE

vide fauna of Japan, p. 132.

Hab.—Kuriles: Shikotan Is. (KOBAYASHI, Trans. Kwansai Ent. Soc., No. 2, p. 62, 1931).

Distr.—Japan (Hokkaidô and Honshiu) and Kuriles.

35. Agriotes fuscicollis MIWA

vide fauna of Japan, p. 135.

Hab.—Saghalien: Konuma (MIWA, Mushi, VI, No. 1, p. 30, 1933); Sakaehama 12-VIII, 1930 (C. WATANABE); Konuma 15-VI, 1932 (M. HORI).

Distr.—Japan (Hokkaidô) and Saghalien.

Genus DOLOPIUS ESCHSCHOLTZ

36. Dolopius marginatus LINNAEUS

vide fauna of Japan, p. 135.

Hab.—Saghalien: Kiminai (MIWA, Monthl. Mag. Zool. Soc. Tôkyô, p. 452, 1929); Hôshin-sandô (MIWA, Mushi, VI, No. 1, p. 30, 1933).

Distr.—Europe, Siberia, Saghalien and Japan (var.)

Subfamily DENTICOLLINAE SCHENKLING

Genus DENTICOLLIS PILLER & MITTERPACHER

37. Denticollis linealis LINNAEUS

Syst. Nat., ed. 10, I, p. 404, (*Elater*) (1758).—CANDÈZE, Mon., IV, p. 478 (*Campylus*) (1863) (Europe, Siberia, Asia-minor, Turkestan and Caucasus).

=*dilutiangulus* (non MOTSCHULSKY) MIWA, Ins. Mats., III, No. 1, p. 50, (1928) (Saghalien and Kuriles); Monthl. Mag. Zool Soc. Tôkyô, XLI, No. 492, p. 452, (1929) (Saghalien and Kuriles); Mushi, IV, No. 1, p. 30, (1933) (Saghalien).

Hab.—Kuriles: Iriribushi in Etorup Is. (MIWA, ibid., 1928). Saghalien: Toyohara, Konuma and Kiminai (MIWA, ibid.); Toyohara and Hôshin-sandô (MIWA, ibid., 1933).

Distr.—Kamtschatka, Dauria, Siberia, Europe, Asia-minor, Persia, Turkestan, Saghalien and Kuriles.

This species is very variable in the size and colouration of the body. Several specimens from 6 mm. to 10 mm. have been collected from Saghalien. The larger specimens have reddish pronotal posterior angles, but in the small ones the prothorax rather smaller, feebly canaliculate and unicolorous on the pronotum. To the formers, a new name ab. *sachalinensis* may be given, but the latters seems to be ab. *subcantharoides* BUYSSON. In the male specimen from Saghalien, the body black, slender and often lacking a reddish tint on each pronotal posterior angle. Not rare.

III. Fauna of Corea

On the *Elateridae* of Corea, E. CANDÈZE at first described one species as *Lacon depressus* in 1874, and next, in 1886, H. J. KOLBE reported 142 species of Coleoptera from Corea, collected by C. GOTTSCHE, in which six Elaterid-species are included. In the following year (1887), L. von HEYDEN issued a paper about the Coleoptera of Corea brought by O. HERZ, in which he enumerated 15 species of Elaterids with a description of new species. In the same year, one new species as *Lacon herzi* was described by E. KOENIG. H. OKAMOTO has reported three Elaterids from Quelpart island in his work "The Insect fauna of Quelpart island" in 1924. In 1927 and 1928, the author reported six species from Corea and the revision of these previous works about the Corean *Elateridae* was completed by himself in 1933.

Since publishing his paper on the *Elateridae* of Corea, the author has made following revision:

Cardiophorus pullatus CANDÈZE=*Paracardiophorus*

Corymbites (*Neopristilophus*) *notabilis* CANDÈZE=*C.* (*Selatosomus*)

Corymbites coreanus MIWA=*C.* (*Selatosomus*) *puberulus* CANDÈZE, var.

Agonischius subsericeus KOLBE and *vittiger* HEYDEN=*A. obscuripes* GYLL., var.

All the species from Corea enumelated in the present paper are 30 in number, four of which are endemic to the fauna. The three of the endemic species seems to be synonymous with some known species as follows:

Elater subscostatus KOLBE=*E. canalicollis* LEWIS?

Elater analogicus KOLBE=*E. miles* LEWIS?

Megapenthes fusconiger KOLBE=*Neotrichophorus plebejus* CANDÈZE?

But the author could not give an exact determination to this supposition, because he has not examined the type specimens of these species. For the reason as above mentioned, the species indigenous to Corea distributed in the neighbouring regions is 96 in number of percentage, in which it has rather close affinity to the faunas of Japan and China than others. In short,

there is a few material in the author's hand to discuss on the Elaterid-fauna of Corea, so that he does not know particularly, but one can orientate a little at present about the distribution of the *Elateridae* in Corea.

The Distribution List of the Species Indigenous to Corea

Species \ Localities	1. Europe	2. Siberia	3. Amur	4. Saghalien & Kuriles	5. Japan	6. Loo-Choo	7. Formosa	8. China	Other Localities
1. *Lacon herzi* KOENIG									
2. *L. binodulus* MOTSCHULSKY					×	×			
3. *L. depressus* CANDÈZE									
4. *L. scrofa* CANDÈZE					×	×			
5. *Paralacon argillaceus* SOLSKY			×				×	×	Indo-China
6. *Tetrigus flabellatus* GERMAR								×	
7. *T. lewisi* CANDÈZE					×	×	×	×	
8. *Elater nigerrimus* LACORDAIRE	×								
9. *E. nigroflavus* GOÈZE	×								
10. *E. subcostatus* KOLBE									
11. *E. analogicus* KOLBE									
12. *Megapenthes fusconiger* KOLBE									
13. *Paracardiophorus pullatus* CANDÈZE					×	×			
14. *Platynychus devius* CANDÈZE								×	
15. *Speniscosomus restrictus* CANDÈZE						×	×		
16. *Melanotus propexus* CANDÈZE								×	
17. *M. legatus* CANDÈZE					×	×	×	×	
18. *M. nuceus* CANDÈZE								×	
19. *M. piger* MOTSCHULSKY						×		×	
20. *M. annosus* CANDÈZE						×	×		
21. *M. erythropygus* CANDÈZE						×			

Species \ Localities	1	2	3	4	5	6	7	8	Other Localities
22. *Limoniscus kraatzi* CANDÈZE			×						
23. *Corymbites (Actenicerus) sjaelandicus* MÜLLER	×	×	×						North America
24. *C. (Selatosomus) puberulus* CANDÈZE			×						Askold
25. *C. (S.) notobilis* CANDÈZE					×				
26. *Prosternon tessellatum* LINNAEUS	×	×	×	×					North America
27. *Ludius niponensis* LEWIS					×		×		
28. *Neotrichophorus plebejus* CANDÈZE					×	×	×		
29. *Agonischius obscuripes* GYLLENHAL					×	×	×	×	Indo-china, India, Caucasus
30. *Silesis musculus* CANDÈZE					×	×			
	4	2	5	3	14	8	6	9	

ELATRIDAE OF COREA

Subfamily AGRYPNINAE FLEUTIAUX

Genus LACON LAPORTE de CASTELNAU

Key to the Species

1. Pro- and meta-pleura with oblique furrows to keep the tarsi of fore and median legs respectively in situ.....*herzi*
1′. Pro- and meta-pleura without such furrow.....(2)
2. Pronotum with a pair of nodules.....*binodulus*
2′. Pronotum without any nodule.....(3)
3. Body with cinereous scale-like hairs.....*depressus*
3′. Body with tawny scale-like hairs.....*scrofa*

1. Lacon herzi KÖNIG

Horae Soc. Ent. Ross., XXI, p. 353, (1887) (Corea).

Hab.—Suigen VI, 1930, (K. SATÔ).

Distr.—Corea and Manchuria: Tokuriji 20-VII, 1933 (K. NOMURA).

2. Lacon binodulus MOTSCHULSKY

vide fauna of Japan, p. 67.

Hab.—Suigen (MIWA, Trans. Nat. Hist. Soc. Formosa, XXIII, No. 125, p. 158, 1933).

Distr.—Japan, Loo-Choo and Corea.

3. Lacon depressus CANDÈZE

Rév. Mon., p. 77, (1874) (Corea).

Hab.—Seoul VII, 1910 (?)

Distr.—Corea.

Closely resembles the preceding species, but the body much more depressed and having cinereous scales.

4. Lacon scrofa CANDÈZE

vide fauna of Japan, p. 69.

Hab.—Seoul to Pingan (KOLBE, Arch. Naturg., p. 197, 1886); Seoul 8-VI, 1919 (E. GALLOIS).

Distr.—Japan, Loo-Choo and Corea.

Genus PARALACON REITTER

5. Paralacon argillaceus SOLSKY

vide fauna of Formosa, p. 186.

Hab.—Taijudong VI, 1919 (E. GALLOIS) (one specimen in the collection of the Entomological Institute, Hokkaidô Imperial University).

Distr.—Indo-China, China, Formosa, Corea, Mongolia and Siberia.

Subfamily HEMIRRHIPINAE FLEUTIAUX

Genus TETRIGUS CANDÈZE

Key to the Species

1. Elytra over thrice as long as the prothorax .....*flabellatus*
1′. Elytra thrice as short as the prothorax .....*lewisi*

6. Tetrigus flabellatus GERMAR.

Zeitschr. Ent., t. V, p. 186, (*Aphanobius*) (1844) (Java).—CANDÈZE, Rév. Mon., p. 157, (1874) (Java).—HEYDEN, Horae Soc. Ent. Ross., XXI, p. 256, (1887) (Corea).

=*pectinicornis* MOTSCHULSKY, Etud. Ent., III, p. 63, (*Agriotes?*) (1854) (North China).

Distr.—Java, China and Corea.

7. Tetrigus lewisi CANDÈZE

vide fauna of Japan, p. 72.

Hab.—Seoul (MIWA, Trans. Nat. Hist. Soc. Formosa, XXIII, No. 125, p. 153, 1933); Saisyûtô VII, (ICHIKAWA).

Distr.—Japan, Loo-Choo, Formosa and Corea.

Subfamily ELATERINAE C. SCHAUFUSS

Genus ELATER LINNAEUS

Key to the Species

1 Prothorax and elytra differ in colour.....(2)
1′. Body entirely black; antennae and legs brownish.....*nigerrimus*
2. Elytra saffrony yellow.....*nigroflavus*
2′. Elytra bright cinnabar reddish.....(3)

3. Antennae serrate from the third joint.....*analogicus*
3′. Antennae serrate from the fourth joint.....*subcostatus*

8. Elater nigerrimus LACORDAIRE

Faune Ent. Paris, I, p. 657, (1835) (Europe).—CANDÈZE, Mon., II, p. 474, (1895) (France, Allemagne and Hongaria).—Horae Soc. Ent. Ross., XXI, p. 256, (*Ampedus*) (1897) (Corea).

Distr.—Europe and Corea.

9. Elater nigroflavus GOEZE

Ent. Beytr., p. 568, (1777) (Europe).—SZOMBÀTHY, Ann. Mus. Nat. Hung., VIII, p. 586, (1910).—REITTER, Fauna Germ., III, p. 239, (1911); Wien. Ent. Zeit., XXXVII, p. 93, (1918).—KUHNT, Illustr. Best.-Tab. Käf. Deutschl., p. 633, (1913).

=*crocatus* LACORDAIRE, Faune Ent. Paris, I, p. 655, 8, (1835).—CANDÈZE, Mon., p. 449, (1859) (N. Europe).—HEYDEN, Horae Soc. Ent. Ross., XXI, 256, (1887) (Corea).

Distr.—Europe and Corea.

10. Elater subcostatus KOLBE

Arch. Naturgesch., LII, p. 197, (1886) (Corea).

Hab.—Seoul (KOLBE, ibid., 1886).
Distr.—Corea.

11. Elater analogicus KOLBE

Arch. Naturgesch., LII, p. 198, (1886) (Corea).

Hab.—Seoul and Pingan (KOLBE, ibid., 1886); Suigen VII, (H. OKAMOTO).
Distr.—Corea.

Genus **MEGAPENTHES** KIESENWETTER.

12. Megapenthes fusconiger KOLBE

Arch. Naturgesch., LII, p. 198, (1886) (Corea).

Hab.—Seoul (KOLBE, ibid. 1886), 28-VIII, 1922 (E. GALLOIS).
Distr.—Corea.

This is usually considered to be synonymous with *Neotrichophorus plebejus* CAND., which corresponds to its diagnosis, but the type is unknown to the author.

Subfamily **ESTHESOPINAE** FLEUTIAUX

Genus **PARACARDIOPHORUS** SCHWARZ

13. Paracardiophorus pullatus CANDÈZE

vide fauna of Japan, p. 95.

Hab.—Suigen, Jinsen and Shyuriin (Trans. Nat. Hist. Soc. Formosa, XXIII, No. 125, p. 158, 1933).
Distr.—Japan, Saghalien and Corea.

Genus **PLATYNYCHUS** MOTSCHULSKY

14. Platynychus devius CANDÈZE

Elat. nouv., III, p. 81, (*Cardiophorus*) (1881) (China: Moupin).—HEYDEN, Horae Soc. Ent. Ross., XXI, p. 257, (*Cardiophorus*) (1887) (Corea).

Distr.—China and Corea.

Subfamily **MELANOTINAE** SCHENKLING

Genus **SPHENISCOSOMUS** SCHWARZ

15. Spheniscosomus restrictus CANDÈZE

vide fauna of Japan, p. 98.

Hab.—Jinsen and Suigen (Trans. Nat. Hist. Soc. Formosa, XXIII, No. 125, p. 158, 1933).
Distr.—Japan, Corea and Formosa.

Genus **MELANOTUS** ESCHSCHOLTZ

Key to the Species

1. Body black.....(2)
1′. Body not black.....(4)
2. Two apical ventral segments of abdomen reddish; 8–9 mm.....*erythropygus*
2′. Abdominal segments black; 14–15 mm.....(3)
3. Legs reddish.....*piger*
4. Castaneous brown, densely griseous pubescent; front with a pair of foveae; legs reddish brown.....*nuceus*
3′. Legs reddish.....*annosus*
4′. Body fuscous.....(5)
5. Opaque, densely cinereous pubescent; front flattened; legs castaneous red; prothorax rather longer than wide.....*propexus*

5′. Rather depressed, shining, fulvous pubescent; front convex; legs ferrugineous; prothorax as long as the width or rather wider than long.....*legatus*

16. Melanotus propexus CANDÈZE

Mon., III, p. 326, (1860) (China).—Kolbe, Archiv, Naturg., LII, p. 199, (1886) (Corea).—HEYDEN, Horae Soc. Ent. Ross., XXI, p. 257, (1887) (Corea).

Hab.—Seoul (KOLBE, ibid., 1886).

Distr.—China and Corea.

17. Melanotus legatus CANEÈZE

vide fauna of Japan, p. 102.

Hab.—Seoul (MIWA, Ins. Mats., II, No. 2, p. 112, 1927).

Distr.—Japan, Loo-Choo, China and Corea.

18. Melanotus nuceus CANDÈZE

Elat. nouv., III, p. 89, (1881) (China: Moupin).—HEYDEN, Horae Soc. Ent. Ross., XXI, p. 257, (1887) (Corea).—SCHWARZ, Deutsche Ent. Zeitschr., p. 164, t, 2, f. 32, (1892).—FLEUTIAUX, Ann. Soc. Ent. Fr., LXIII, p. 688, (1894) (Tonkin).

Distr.—China, Tonkin and Corea.

19. Melanotus piger MOTSCHULSKY

vide fauna of Japan, p. 104.

Distr.—Japan and Corea.

The author has not been collected this species from Corea otherwise than *Spheniscosomus restrictus* which corresponds closely to the diagnosis of *M. piger* MOTSCH. from Japan and Corea.

20. Melanotus annosus CANDÈZE

vide fauna of Japan, p. 103.

Hab.—Suigen (MIWA, Trans. Nat. Hist. Soc. Formosa, XXIII, No. 125, p. 158. 1933).

Hab.—Japan, Loo-Choo and Corea.

21. Melanotus erythropygus CANDÈZE

vide fauna of Japan, p. 100.

Hab.—Suigen (MIWA, Trans. Nat. Hist. Soc. Formosa, XXIII, No. 125, p. 158 1933).

Distr.—Japan, Formosa? and Corea.

Subfamily **ATHOINAE** C. SCHAUFUSS

Genus **LIMONISCUS** REITTER

22. Limoniscus kraatzi CANDÈZE

Berl. Ent. Zeitschr., XXIII, p. 281, (*Limonius*) (1879) (Amur).—REITTER, Best.-Tab., 56, pp. 14 & 15, (1905).—MIWA, Ins. Mats., II, No. 3, p. 133, (1928) (Corea).

Hab.—Kôryô (MIWA, ibid., 1928).

Distr.—Amur and Corea.

Subfamily **CORYMBITINAE** SCHENKLING

Genus **CORYMBITES** LATREILLE

Subgenus **ACTENICERUS** KIESENWETTER

23. Corymbites (Actenicerus) sjaelandicus O. F. MÜLLER

Fauna Fridrichsdal., p. 21, (*Elater*) (1764) (Eupope).—HEYDEN, Horae Soc. Ent. Ross., XXI, p. 256, (*Cteniocerus*) (1887) (Corea).—CANDÈZE, Elat. Nouv., IV, p. 48, (1889) (N. America, Siberia and Amur).—JAKOBSON, Žuki Rossiji, 1905-16, t. 38, f. 25, (1913) (Europe and Siberia).

=*tessellatus* (nec. LINNAEUS) FABRICIUS, Syst. Ent., p. 211, (*Elater*) (1775) (Europe).—OLIVIER, Ent., II, nr. 31, p. 26, t. 3, f. 22, (1790).—CANDÈZE (non LINNAEUS), Mon., IV, p. 104, (1863) (Europe, Siberia and N. America).

Distr.—Europe, Siberia, Amur, Corea and North America.

Subgenus **SELATOSOMUS** STEPHENS

Key to the Species

1. Robust, three and half times shorter than its width, aeneous black, griseous pubescent; elytra aeneous shining; 17 mm.....*puberulus*

1′. Elongate, four times longer than it is wide; black, cinereous pubescent; elytra brownish or sometimes brassy; 26 mm.....*notabilis*

24. Corymbites (Selatosomus) puberulus CANDÈZE

Berl. Ent. Zeitschr., XXIII, p. 282 (1879) (Amur).—HEYDEN, Horae Soc. Ent. Ross., XXI, p. 256, (*Cteniocerus*) (1887) (Corea).—REITTER Wien. Ent. Zeit., XXIX, p. 166, (1910); nota 1.

var. **coreanus** MIWA, Ins. Mats., II, No. 3, p. 141, pl. V, f. 15, (1928) (Corea).

Hab.—Kôryô and Sakuôji (MIWA, ibid., 1928).
Distr.—Amur, Askold and Corea..

25. Corymbites (Selatosomus) notabilis CANDÈZE

vide fauna of Japan, p. 120.
Distr.—Japan and Corea.

Genus **PROSTERNON** LATREILLE

26. Prosternon tessellatum LINNAEUS

vide fauna of Saghalien and Kuriles, p. 155.
Hab.—Shuotsu (MIWA, Trans. Nat. Hist. Soc. Formosa, XXIII, No. 125, p. 158 1933).
Distr.—Europe, Siberia, Corea and North America.

Subfamily **LUDIINAE** FLEUTIAUX

Genus **LUDIUS** BERTHOLD

27. Ludius niponensis LEWIS

vide fauna of Japan, p. 127.
Hab.—Kôryô (MIWA, Trans. Nat. Hist. Soc. Formosa, XXIII, No. 125, p. 158, 1933); Kongôsan 10-VIII, 1933, (K. NOMURA).
Distr.—Japan, Formosa and Corea.

Genus **NEOTRICHOPHORUS** JAKOBSON

28. Neotrichophorus plebejus GANDÈZE

vide fauna of Japan, p. 129.
Hab.—Seoul (MIWA, Ins. Mats., III, No. 1, p. 42, 1928).
Distr.—Japan, Loo-Choo, Formosa and Corea.

Genus **AGONISCHIUS** CANDÈZE

29. Agonischius obscuripes GYLLENHAL

vide fauna of Japan, p. 130.
The following two varieties have been reported from Corea.
var. **subsericeus** KOLBE.
Arch. Naturgesch., LII, p. 197, (1886) (Corea).

Hab.—Fusan to Seoul (KOLBE, ibid., 1886).
Distr.—Corea.

var. **vittiger** HEYDEN.
Horae Soc. Ent. Ross., XXI, p. 267, (1887) (Corea).—MIWA, Ins. Mats., III, No. 1, p. 47, (1928).
=*vitticollis* (pars) MIWA, Ins. Mats., II, No. 1, p. 18, Pl. I, f. 12, (1927) (Corea).
Hab.—Saishûtô (MIWA, ibid., 1927); Keijô (MIWA, ibid., 1928); Kôryô 25-VIII, 1925?
Distr.—Corea, Formosa and Loo-Choo.

Subfamily **SYNAPTINAE** FLEUTIAUX

Genus **SILESIS** CANDÈZE

30. Silesis musculus CANDÈZE

vide fauna of Japan, p. 137.
Hab.—Kôryô (MIWA, Trans. Nat. Hist. Soc. Formosa, XXIII, No. 125, p. 158, 1933).
Distr.—Japan, Corea and Loo-Choo.

Addition to the fauna of Corea

Platynychus adjutor CANDÈZE

vide fauna of Japan, p. 97.
Hab.—Fusan VII, 1929 (?)
Distr.—Japan, Loo-Choo, Formosa and Corea.

IV. Fauna of Formosa

Regarding the *Elateridae* of Formosa the first work was done by H. W. BATES in 1866, in which he reported ten species of *Elateridae* with descriptions of five new species.

The second work was issued by O. SCHWARZ who has described one species such as *Sephilus formosanus* together with the many new Malayan species in 1902. In 1910, three new species were described by SZOMBÀTHY, which were sent from Formosa to the Hungarian Natural History Museum by H. SAUTER. A year before this (1909), the same author reported one species as *Alaus pini* LEWIS from Formosa, which had been already recorded from Japan, but this seems to be a synonmy to *A. putridus* CAND. In 1911, S. MATSMURA reported some injurious or useful insects relative to the sugar caneplanting in Formosa, in which eight new species of *Elateridae* collected from the cane fields have been described. During the past five years from 1927 to 1931 the author has described many new species or noted on others found in Formosa, and enumerated the species to the total of 153 in his "Systematic Catalogue of Formosan Coleoptera," published in 1931. Most of the species treated in the author's investigation are of the collection of the Government Research Institute, Formosa, but some of them are those of H. SAUTER's collection in the Deutsches Entomologisches Institut, Berlin-Dahlem, by which the author has reported "H. SAUTER's Formosa-Ausbeute" in 1930 and 1931.

Some species new to the fauna or revised in the present investigation are as follows:

Lacon taciturnus CANDÈZE=*Paralacon*
Paralacon koshunensis MIWA=*P. taciturnus* CANDÈZE
Meristhus quadripunctatus CANDÈZE (new to Formosa)
Prodrasterius 6-punctatus MIWA=*Heteroderes triangularis* ESCHSCHOLTZ
Prodrasterius sacchari MIWA=*Heteroderes triangularis*, var.

Megapenthes robustus MIWA=*Xanthelater*
Megapenthes bispinicollis MIWA=*Pengamethes*
Hypnoidus nitobei MIWA=*Zorochrus*
Cardiophorus comptus CANDÈZE=*Phorocardius*
Cardiophorus yanagiharae MIWA=*Phorocardius*
Cardiophorus formosanus MATSUMURA=*Platynychus*
Paracardiophorus cryptohypnoidus MIWA=*Hypnoidus*
Neodiploconus castaneus MIWA=*N. angulatus* CANDÈZE, var.
Aphanobius fuscomarginatus LEWIS, *formosanus* MIWA and *vittrger* HEYDEN=*Agonischius obscuripes* GYLLENHAL, var.

(New Species)

Agrypnus pescadorensis sp. nov.
Adelocera ramatasenseni sp. nov.
Elater (*Pseudelater*) *habunensis* sp. nov.
Melanoxanthus amianus sp. nov.
Neodiproconus elegans, var. *obayashii* var. nov.
Athous (*Heterathous*) *antennatus* sp. nov.
Corymbites (*Metactenicerus*) *speciosus*, var. *viridus* var. nov.
Corymbites (*Metactenicerus*) *gratus*, var. *fuscipes* MIWA=*C.* (*M.*) *fuscipes* sp. nov.
Agriotes taiyarui sp. nov.

The total number of species found in Formosa is 150 at present, in which three species, viz. *Agrypnus politus* CAND. *Lacon formosanus* BATES and *Melanotus tamsuyensis* BATES are also reported from Kôtôsho and two of them, viz. *Lacon musculus* CAND. and *Agonischius obscuripes* GYLL. are also distributed in Hôkotô, while the author makes first record from Kizantô, of a species as *Campsosternus auratus* DRURY in present occasion. The Elaterid-fauna of Formosa including adjacent small islets, viz. Pescadores (Hôkotô), Botel-tobago (Kôtôsho), Samasana (Kwashôtô), Kizantô, etc., as you see in the distribution list, has close affinity to the fauna of the following regions such as Indo-China, India and South China. The species indigenous to Formosa distributed to Japan is 12 in number of percentage, but most of them are the species rather belonging to the Oriental fauna and having a wide distribution, which have been already designated as the tropical species in Japan.

The Distribution List of the Species Indigenous to Formosa

Species \ Localities	1. Japan	2. Corea	3. Loo-Choo	4. China	5. Indo-China	6. India	7. Ceylon	8. Malay archipelago	9. Philippines	Other Localities
1. *Agrypnus politus* CANDÈZE				×				×		
2. *A. pescadorensis* MIWA										
3. *Adelocera kikuchii* MIWA										
4. *A. tosta* CANDÈZE					×	×		×		
5. *A. ramatasenseni* MIWA			×							
6. *Lacon formosanus* BATES			×	×						
7. *L. bipapulatus* CANDÈZE			×	×						
8. *L. musculus* CANDÈZE				×	×	×		×		
9. *L. modestus* CANDÈZE			×			×	×			
10. *L. setiger* BATES										
11. *L. montanus* MIWA										
12. *L. tuberculipennis* MIWA										
13. *L. kawamurae* MIWA										
14. *L. taiwanus* MIWA										
15. *L. sakaguchii* MIWA				×						
16. *L. uraiensis* MIWA										
17. *L. microcephalus* MOTSCHULSKY	×		×		×	×	×	×	×	
18. *L. tumens* CANDÈZE	×						×			
19. *Paralacon taciturnus* CANDÈZE				×	×	×	×			East Siberia & Mongolia
20. *P. argillaceus* SOLSKY		×			×	×				
21. *Compsolacon formosanus* MIWA										
22. *Meristhus quadripunctatus* CANDÈZE							×	×		
23. *M. scobinula* CANDÈZE	×				×					
24. *Alaus putridus* CANDÈZE	×			×	×	×			×	Bonin Island
25. *A. berus* CANDÈZE	×			×		×				

Species \ Localities	1	2	3	4	5	6	7	8	9	Other Localities
26. *Alaus elongatus* MIWA										
27. *A. mus* MIWA										
28. *Tetrigus lewisi* CANDÈZE	×	×	×	×						
29. *Pectocera fortunei* CANDÈZE	×		×	×						
30. *Campsosternus auratus* DRURY			×	×	×					
31. *C. gemma* CANDÈZE				×						
32. *C. mirabilis* FLEUTIAUX										
33. *Sephilus fomosranus* SCHWARZ			×							
34. *Anathesis laconoides* CANDÈZE				×	×			×		
35. *Aeoloderma brachmana* CANDÈZE				×	×	×	×	×	×	
36. *A. sinensis* CANDÈZE			×	×	×	×		×		
37. *Heteroderes intermedius* CANDÈZE					×			×		
38. *H, triangularis* ESCHSCHOLTZ				×	×	×		×	×	
39. *H. albicans* CANDÈZE				×	×					
40. *H. oblitus* CANDÈZE					×	×				
41. *Prodrasterins brahminus* CANDÈZE					×	×				
42. *Elater bimaculatus* MIWA										
43. *E. cambodiensis* FFEUTIAUX					×					
44. *E. formosensis* MIWA										
45. *E. (Pseudelater) habunensis* MIWA										
46. *Xantherater granulipennis* MIWA			×							
47. *X. robustus* MIWA										
48. *Pengamethes bicarinatus* LEWIS	×									
49. *P. bispinicollis* MIWA										
50. *P. parallelaris* MIWA										
51. *P. oblongicollis* MIWA										
52. *Megapenthes ligatus* CANDÈZE				×	×	×				
53. *M. koshunensis* MIWA										
54. *M. sonami* MIWA										
55. *M. horishanus* MIWA										

Species \ Localities	1	2	3	4	5	6	7	8	9	Other Localities
56. *Melanoxanthus melanocephalus* FABRICIUS			×	×	×	×	×	×	×	Africa, Madagascar, Newzealand, Brasil
57. *M. montivagus* MIWA										
58. *M. nigripennis* FLEUTIAUX					×					
59. *M. luzonicus* FLEUTIAUX									×	
60. *M. amianus* MIWA										
61. *M.* (*Ganoxanthus*) *quadriguttatus* MIWA										
62. *Anchastus castelnaui* CANDÈZE			×		×					
63. *Hypnoidus cryptohypnoidus* MIWA										
64. *Zorochrus curatus* CANDÈZE	×									
65. *Z. nitobei* MIWA										
66. *Quasimus shirakii* MIWA										
67. *Q. horishanus* MIWA										
68. *Q. luteipes* CANDÈZE	×									
69. *Q. ovalis* CANDÈZE	×							×		
70. *Q. ellipticus* CANDÈZE	×									
71. *Cardiohypnus coomani* FLEUTIAUX					×	×				
72. *Phorocardius comptus* CANDÈZE						×				
73. *P. yanagiharae* MIWA										
74. *Cardiophorus cervilis* CANDÈZE						×				
75. *C. carduelis* CANDÈZE					×			×		
76. *C. sonani* MIWA										
77. *C. baibarasanus* MIWA										
78. *Paracardiophorus devastans* MATSUMURA										
79. *Platynychus systenus* CANDÈZE						×				
80. *P. formosanus* MATSUMURA										
81. *P. adjutor* CANDÈZE	×	×	×							
82. *Cardiotarsus rarus* MIWA										
83. *C. pallidipes* MIWA										
84. *C. humeralis* MIWA										
85. *Psellis formosanus* SZOMBÀTHY										

Species \ Localities	1	2	3	4	5	6	7	8	9	Other Localities
86. *Neodiploconus ciprinus* CANDÈZE									×	
87. *N. angulatus* CANDÈZE				×	×	×				
88. *N. elegans* SZOMBÀTHY										
89. *N. melanopterus* CANDÈZE					×			×		
90. *N. sanguinicollis* MIWA										
91. *Speniscosomus restrictus* CANDÈZE	×	×	×							
92. *S. horishanus* MIWA										
93. *S. pilosulus* MIWA										
94. *S. melanotoides* MIWA										
95. *S. frequens* MIWA										
96. *Melanotus ventralis* CANDÈZE				×						
97. *M. ebeninus* CANDÈZE									×	
98. *M. umber* BATES			×							
99. *M. regalis* CANDÈZE				×	×					
100. *M. fuscus* FABRICIUS					×	×				
101. *M. tamsuyensis* BATES			×							
102. *M. rufiventris* MIWA										
103. *Creminostethus telum* CANDÈZE						×				
104. *Metriaulacus badiipennis* CANDÈZE						×				
105. *M. formosanus* MIWA										
106. *Parathous sanguineus* FLEUTIAUX					×					
107. *Athous rufithorax* MIWA										
108. *A.* (*Alcimathous*) *temperatus* MIWA										
109. *A.* (*A.*) *tattakensis* MIWA										
110. *A.* (*Heterathous*) *antennatus* MIWA										
111. *A.* (*H.*) *rufangulus* MIWA										
112. *A.* (*Crepidophorus*) *nigripennis* MIWA										
113. *Taiwanathous arisanus* MIWA										
114. *Corymbites* (*Actenicerus*) *formosensis* MIWA										
115. *C.* (*Metactenicerus*) *speciosus* MIWA										

Species \ Localities	1	2	3	4	5	6	7	8	9	Other Localities
116. *Corymbites (Metactenicerus) fuscipes* MIWA										
117. *Penia eschscholtzi* HOPE						×				
118. *Csikia dimatoides* SZOMBÀTHY										
119. *C. taiwana* MIWA										
120. *Ludius sieboldi* CANDÈZE	×		×							
121. *L. niponensis* LEWIS	×	×								
122. *Neotrichophorus plebejus* CANDÈZE	×	×	×							
123. *N. carinicephalus* MIWA										
124. *Aphanobius longithorax* WIEDEMANN					×	×		×	×	
125. *A. alaomorphus* CANDÈZE				×	×	×				
126. *Parallelostethus acutus* CANDÈZE						×		×		
127. *Ludigenus politus* CANDÈZE					×	×		×	×	
128. *Scelisus sanguineus* CANDÈZE						×				
129. *Agriotides tonkinensis* FLEUTIAUX					×					
130. *Agriotes fuscus* MIWA										
131. *A. taiyarui* MIWA										
132. *A. sonanis* MIWA										
133. *A. nokozanus* MIWA										
134. *A. angustatus* MIWA										
135. *Agonischius obscuripes* GYLLENHAL	×	×	×	×	×	×				
136. *A. mushanus* MIWA										
137. *A. gracilis* MIWA										
138. *Glyphonyx kankaui* MIWA										
139. *G. longulus* MIWA										
140. *G. castaneus* MIWA										
141. *G. sauteri* MIWA										
142. *G. arisanus* MIWA										
143. *G. brunneipennis* MIWA										
144. *G. rubricollis* MIWA										
145. *Silesis sauteri* MIWA				×						
146. *Silesis absimilis* CANDÈZE										
147. *S. mutabilis* BATES										
148. *Denticollis pueriles* MIWA										
149. *D. mounaldaui* MIWA										
150. *Hemiops flava* LAPORTE DE CASTELNAU					×	×	×		×	
151. *Plectrosternus rufus* LACORDAIRE						×	×			
	18	7	22	25	36	30	3	19	9	

ELATERIDAE OF FORMOSA

Subfamily AGRYPNINAE FLEUTIAUX

Genus AGRYPNUS ESCSCHOLTZ

Key to the Species

1. Black; elytra smooth, hardly striate.....*politus*
1′. Reddish brown; elytra visibly striate.....*pescadorensis*

1. Agrypnus politus CANDÈZE

Mon., I, p. 43, pl. I, f. 2, (1857) (China); Rév., p. 12, (1874) (Java).—BATES, Proc. Zool. Soc. Lond., p. 350 (1866) (Formosa).—MIWA, Trans. Nat. Hist. Soc. Formosa, XIX. No. 102, p. 226, (1929) (Formosa).

Hab.—Nantô, Taihoku, Horisha, Rikiriki and Kizan (Trans. Nat. Hist. Soc. Formosa, XIX, No. 102, p. 226, 1929); Taihorin, Kôsempo, Kankau, Hokuto and Chip-Chip (Wien. Ent. Zeit., XLVII, p. 96, 1930); Kôtôsho (Trans. Nat. Hist. Soc. Formosa, XXII, No. 121, p. 301, 1932); Kagi 25-V, 1926 (S. AKASAKA); Urai 24-VI, 1933 (K. KOBAYASHI).

Distr.—Java, China and Formosa.

CANDÈZE reported in 1874, that there is one specimen of *A. politus* from Japan in the collection of the Leyden Museum, which was obtained by SIEBOLD, but hitherto this species has not been collected from Japan by the author. To locate and designate this to Japan is a mistake and the exact locality being Java. Thus the author has rejected this species from the fauna of Japan.

2. Agrypnus pescadorensis sp. nov. (Pl. IX, f. 3)

Reddish brown, shining, clothed with cinereous pubescence. Head concave, coarsely and strongly punctured, the frontal carina depressed in the middle. Prothorax convex, rather longer than it is wide, the widest at the base, gradually and gently narrowing anteriorly, rather straight at the sides, with even and ocellate punctures on the disk of pronotum, but the punctation more denser and rather uneven on the lateral part, with a median longitudinal smooth carina which is very conspicuous and extending from the base to the anterior rim; hind angles acute and turned outwards, each with a long carina; scutellum nearly oblong, declined anteriorly, very closely and rather rugosely punctulate, with closely congested hairs at the posterior rim. Elytra densely but weakly punctured and regularly striate, with the interstices broad and plane, rather transversely rugose, the apical extremity of each elytron somewhat emarginate.

Antennae bright reddish yellow, the three basal joints a little shining, but the remainders mat, very closely and rather rugosely punctured. Legs dark reddish, somewhat shining, thickly covered with long pubescence.

Length: 26 mm. Width: 7 mm.

Hab.—Hôkotô (Pescadores) V, 1932 (T. CHIN).

This species is named after the Peacadores in memory of the locality of the type-specimen.

Genus ADELOCERA LATREILLE

Key to the Species

1. Body uniformly obscure reddish; 17½ mm .....*ramatasenseni*
1′. Body variegated, usually shorter than 10 mm.....(2)
2. Prothorax wider than long, with a pair of longitudinal carinae on the pronotal disk and transversely elevated in the middle.....*tosta*
2′. Prothorax longer than wide, without carina or nodule on the pronotal disk .....*kikuchii*

3. Adelocera kikuchii MIWA

Trans. Nat. Hist. Soc. Formosa, XIX, No. 102, p. 226, (1929) (Formosa).

Reddish brown a little shining, rather variegated with red and fuscous tints on the upper part of the body, clothed with golden grey hairs. Head impressed triangularly between the antennae, densely but rather coarsely punctured. Prothorax convex, with the punctures like that of the head on the lateral parts of the pronotum, but a little sparser and finer on the disk, rather parallel at the sides, but very slightly and gently narrowing anteriorly from the middle part; hind angles acute and turned outwards, with a carinated ridge; scutellum nearly elliptical. Elytra at the basal part much paler especially at the sides of the scutellum, very densely and rather rugosely punctured on the lateral parts, but somewhat sparsely punctured and scarsely set in row on the dorsal part. Antennae fuscous, very distinctly serrate. Legs fuscous, the claws reddish.

Length: 8 mm. Width: 2¼ mm.

Hab.—Horisha (MIWA, ibid., 1929).

Distr.—Formosa.

4. Adelocera tosta CANDÈZE

Mon., I, p. 129 (*Lacon*) (1857) (India); Rév., pp. 46 & 67, (*Lacon*) (1874) (Malacca, Cambodja and Borneo); Ann. Mus. Genova, p. 100, (*Lacon*) (1878) (Borneo); ibid., p. 669, (1888) (Tenasserim and Sumatra); Ann. Soc. Ent. Belg., XXXIV,

p. 149, (*Lacon*) (1890) (Bengal); Ann. Mus. Genova, p. 773, (*Lacon*) (1891) (Birma); Ann. Soc, Ent. Belg., LXXXVII, p. 484, (*Lacon*) (1892) (Bengal, Sumatra and Borneo); Ann. Mus. Genova, p. 485, (*Lacon*) (1894) (Sumatra, Malay, Bengal and Birma).—FLEUTIAUX, Ann. Soc. Ent. Fr., LXXXVII, p. 192, (*Lacon*) (1918) (Indo-China, Lombok, Parouan, etc.).—MIWA, Trans. Nat. Hist. Soc. Formosa, XIX, No. 102, p. 232, (*Lacon*) (1929) (Formosa).

Hab.—Taihoku and Horisha (MIWA, ibid., 1929); Heitô 22-V, 1930 (Y. MIWA).

Distr.—India, Malacca, Tenasserim, Borneo, Sumatra, Java, Lombok, Parouan, Birma, Bengal, Malay, Indo-China and Formosa.

5. Adelocera ramatasenseni sp. nov. (Pl. IX, f. 20)

Obscure reddish, rather fuscous, a little shining, thickly covered with golden greyish scale-like pubescence. Head very closely, strongly and rather unevenly punctured, with a triangular impression between the eyes, the front nearly vertical and concave. Prothorax convex, the broadest at the base, gradually narrowing anteriorly, with the sides well margined and somewhat sinuous, very finely snd rather evenly punctured on the pronotal disk, but the punctures much denser and more stronger on the lateral part; hind angles rather short, slightly turned outwards, with a carina rather obliterated by a rugose punctation and hardly perceptible; scutellum longer than wide, parallel sided, being transverse at the anterior margin, but semicircular behind, with a coarse and rather rugose punctulation. Elytra unevenly punctured, obscurely striate with punctures, the interstices rather flattened, scarcely visible and feebly rugose. Antennae dusky reddish yellow, finely pubescent. Legs reddish brown, with short scale-like pubescence.

Length: 17½ mm. Width: 5 mm.

Hab.—Musha 27-VII, 1918 (H. KAWAMURA): Holotype. Arisan VI, 1914 (M. MAKI): Paratype.

This species has been collected from the mountainous regions of Formosa. There is a specimen in the collection of Kiushiu Imperial University, which has been collected by T. ESAKI from Mt. Kanzan.

The author has named this new species after RAMATASENSEN who was a famous head-hunter in the savage region of Formosa.

Genus LACON LAPORTE DE CASTELNAU

1. Pro- and meta-pleuron with oblique grooves to keep the tarsi of anterior and median legs in situ.....(6)
1′. Pro- and meta-pleuron without such groove.....(2)

2. Elytra punctate-striate.....(3)
2′. Elytra with diffused punctation and lacking regular striation.....(4)
3. Elytra covered with variegated scales.....(5)
3′. Elytra with uniform coloured scales.....*musculus*
4. Elytra with three fasciae of white scales.....*microcephalus*
4′. Elytra without fascia.....*tumens*
5. Pronotal posterior angles short and truncate, with the lateral margin somewhat sinuate.....*bipapulatus*
5′. Pronotal posterior angles longer, with the lateral margin well arched.....*formosanus*
6. Elytra with long elected hairs, besides densely covered with scales.....*setiger*
6′. Elytra without elected hair.....(7)
7. Elytra with a pair of tubercles.....*tuberculipennis*
7′. Elytra without tubercle.....(8)
8. Lateral margins of the prothorax crenulate.....(9)
8′. Lateral margins of the prothorax not crenulate.....(10)
9. Scutellum nearly pentagonal.....*sakaguchii*
9′. Scutellum nearly elliptical.....*uraiensis*
10. Prothorax with a pair of transverse nodules on the pronotal disk.....*kawamurae*
10′. Prothorax without nodule.....(11)
11. Body narrow, convex; pronotum with a longitudinal naked smooth line in the middle.....*taiwanus*
11′. Body braod, depressed; pronotum without smooth line.....*montanus*

6. Lacon formosanus BATES

Proc. Zool. Soc. Lond., II, p. 348, (1866) (Formosa).—CANDÈZE, Rév. Mon., p. 71, (1874).—MIWA, Trans. Nat. Hist. Soc. Formosa, XIX, No. 102, p. 228, (1929) (Formosa); ibid., XXIII, No. 124, p. 8, (1933) (Loo-Cchoo).

Hab.—Taihoku, Kwarenkô, Taito, Kôshun, Musha and Baibara (MIWA, ibid., 1929); Kankau, Pilam, Tainan, Sokutsu and Kôsempo (Wien. Ent. Zeit., XLVII, (2) p. 96, 1930); Kôtôsho (Trans. Nat. Hist. Soc. Formosa, XXII, No. 121, p. 301, 1932); Kuraru VII, 1926 (Y. MIWA).

Distr.—Formosa and Loo-Choo.

7. Lacon bipapulatus CANDÈZE

Elat. nouv., I, p. 11, (1865) (China); Rév. Mon., p. 69, (1874) (China).—MIWA, Trans. Nat. Hist. Soc. Formosa, XIX, No. 102, p. 228, (1929) (Formosa); ibid., No. 103, p. 343, (Loo-Choo).

Hab.—Taihoku and Taipin (MIWA, ibid., 1929); Fuhosho, Sokutsu and Hoozan (Wien. Ent. Zeit. XLVII (?), p. 96, 1930); Arisan 22-IV, 1917 (T. SHIRAKI).

Distr.—China, Formosa and Loo-Choo.

8. Lacon musculus CANDÈZE

Mon., I, 141, (1857) (China); Rév., p. 77, (1874) (Hongkong).—MIWA, Trans. Nat. Hist. Soc. Formosa, XIX, No. 102, p. 228, (1929) (Formosa).

=*depressus* (nec. CAND.) MIWA, Trans, Nat. Hist. Soc. Formosa, XXI, No. 116, p. 259, (1931) (Loo-Choo).

=*scrofa* (nec. CAND.) MIWA, Trans. Nat. Hist. Soc. Formosa, XIX, No. 102, p. 229, (1929) (Formosa).

=*shirakii* MATSUMURA, Mém. Soc. Ent. Belg., XVIII, p. 146, (1911) (Formosa).

Hab.—Taihoku (MATSUMURA, ibid., 1911); Kwarenkô, Mt. Shichisei, Shôkwa, Rokkiri and Kwôri (MIWA, ibid., 1929); Hôkotô (Trans. Nat. Hist. Soc. Formosa, XIX, No. 104, p. 469, 1929); Sôzan 25-VIII, 1931 (J. SONAN); Toroku 25-V, 1933 (Y. MIWA); Kuraru 31-VII, 1931 (T. SHIRAKI).

Distr.—South China*, Formosa and Loo-Choo.

9. Lacon modestus CANDÈZE

Mon., I, p. 118, (1857) (Java); Rév., p. 63, (1874) (India and Malay archipel.).—FLEUTIAUX, Ann. Soc. Ent. Fr., LXXIV, p. 320, (1905) (Borneo, Sumatra and Indo-China).

Hab.—Anping (Wien. Ent. Zeit., XLVII, (2) p. 96, 1930); Sôzan 5-VI, 1932 (Y. MIWA); Tompo VII, 1925 (Y. MIWA); Kuraru 9-V, 1927 (T. AKASHI).

Distr.—India, Java, Sumatra, Borneo, Indo-China and Formosa.

10. Lacon setiger BATES

Proc. Zool. Soc. Lond., II, p. 348, (1866) (Formosa).—CANDÈZE, Rév. Mon., pp. 45, & 61, (1874).—MIWA, Trans. Nat. Hist. Soc. Formosa, XIX, No. 102, p. 229, (1929); ibid., XXIII, No. 124, p. 9, (1933) (Loo-Choo).

Hab.—Taihoku, Hokuseiko, Horisha and Kôshun (MIWA, ibid., 1929); Sokutsu and Taihorin (Wien. Ent. Zeit., XLVIII, (2) p. 96, 1930); Urai 18-VII, 1930 (Y. MIWA).

Distr.—Formosa and Loo-Choo (Iriomote).

11. Lacon montanus MIWA

Trans. Nat. Hist. Soc. Formosa, XIX, No. 102, p. 229, (1929) (Formosa).

Reddish brown, rather fuscous, with golden yellow pubescence. Head impressed triangularly between the antennae, densely but coarsely punctured. Prothorax depressed, widest at the base, slightly and gradually narrowing anteriorly, with the lateral margins somewhat sinuous and furnished with

* There are some specimens from Hainan collected by Prof. T. SHIRAKI in 1911.

some small blunt teeth, densely punctured on the lateral parts of the pronotum, but rather feebly and somewhat sparsely set on the disk; hind angles short and blunt; scutellum nearly pentagonal, thickly covered with griseous hairs. Elytra with punctured striae, the interstices feebly but rugosely punctured. Antennae and legs reddish brown. Very closely allied to *L. kawamurae*, but it is easily distinguished from the latter by non-nodulose pronotum.

Length: 11 mm. Width: 4¼ mm.

Hab.—Shinchiku and Baibara (MIWA, ibid., 1929); Taiheizan VII, 1930 (S. MINOWA); Eboshiyama 17~21-V, 1933 (M. CHÛJÔ).

Distr.—Formosa.

12. Lacon tuberculipennis MIWA

Trans. Nat. Hist. Soc. Formosa, XIX, No. 102, p. 230, f. (1929) (Formosa).

Rather fuscous, covered with golden yellow pubescence. Head impressed triangularly between the eyes, densely and coarsely punctured. Prothorax convex, with the sides rather parallel, somewhat sinuous and crenulate like that of *L. montanus*, very densely punctured on the lateral parts of the pronotum, but having a little sparse and finer punctures on the disk, on the same surface near the base with a pair of nodules which resemble those of *L. kawamurae;* hind angles rather blunt and very slightly turned outwards; scutellum nearly pentagonal. Elytra punctate-striate, the interstices flattened, rather obscure, at the distance of two thirds of the elytra from the base with a tubercle on each elytron respectively, which is occupying on the third to sixth interstices and free from hair. Antennae and legs fuscous.

Length: 12 mm. Width: 4 mm.

Hab.—Baibara (MIWA, ibid., 1929).

Distr.—Formosa.

13. Lacon kawamurae MIWA

Trans. Nat. Hist. Soc. Formosa, XIX, No. 102, p. 230, (1929) (Formosa).

Rather depressed, reddish brown with short golden yellow pubescence. Head with a triangular impression in the middle, densely punctured. Prothorax with a transverse nodule on each side of a feeble channel which is running longitudinally in the middle of the pronotal disk, very densely punctured on the lateral parts of the pronotum, but rather sparsely and somewhat finely on the disk, rather parallel sided but slightly narrowed forwards somewhat sinuous and crenulate at the margin; hind angles rather obtuse behind and turned outwards; scutellum nearly pentagonal. Elytra with punctured striae, the interstices coarsely punctate and rather feebly rugose. Antennae reddish brown, concolorous with the legs.

Length: 11–13 mm. Width: 3¾–5 mm.

Hab.—Hori (MIWA, ibid., 1929); Kôsempo (Wien. Ent. Zeit., XLVII, (2) p. 91, 1930).

Distr.—Formosa.

14. Lacon taiwanus MIWA

Ins. Mats., II, No. 1, p. 13, pl. I, f. 2, (1927) (Formosa); Trans. Nat. Hist. Soc. Formosa, XIX, No. 102, p. 231, (1929) (Formosa).

Bright reddish brown, little shining, thickly covered with golden grey hairs. Head with a feeble triangular impression in the middle, densely and coarsely punctured. Prothorax convex, slightly arched and somewhat crenulate at the sides, with a smooth median longitudinal line on the pronotal disk, which extends from the frontal margin to the basal rim, very densely punctured on the lateral parts of the pronotum, but rather sparsely and evenly set on the disk; the tarsal furrow of the pro- and meta-sternum conspicuously impressed; hind angles rather short, truncate behind and somewhat turned outwards; scutellum visibly punctulate, rather elongate and obtusely acuminate behind. Elytra punctate-striate, the interstices rather plane, minutely punctulate. Antennae brownish yellow, the three basal joints fuscous. Legs reddish brown.

Length: 10½ mm. Width: 3 mm.

Hab.—Baibara, Horisha, Arisan, Taiko and Kôshun (MIWA, ibid., 1929); Rimogan 12-V, 1933 (M. CHÛJÔ).

Distr.—Formosa.

15. Lacon sakaguchii MIWA

Ins. Mats., II, No. 1, p. 14, Pl. I, f. 3, (1928) (Okinawa); Trans. Nat. Hist. Soc. Formosa, XIX, No. 102, p. 231, (1929) (Formosa); ibid., No. 103, pp. 341 & 343 (Okinawa).

Dark reddish brown, but the epipleural margin and elytral suture paler, little shining, with short griseous pubescence. Head with a median triangular impression between the eyes, densely and coarsely punctured. Prothorax convex, with the sides slightly sinuous, gradually narrowing anteriorly from the base to the middle part and then suddenly narrowed to the frontal rim, closely and rather evenly punctured on the pronotal disk, but much densely and finely set on the lateral parts; hind angles depressed, somewhat paler, rather obtuse behind and produced backwards. Elytra striate with strong punctation, the interstices 3rd to 5th being more convex than others, minutely and unevenly punctured. Antennae fuscous. Legs reddish brown.

Length: 10½ mm. Width: 3⅓ mm.

Hab.—Shinchiku (MIWA, ibid., 1929); Hinokiyama 22-VII, 1929 (Y. MIWA); Urai VII, 1931 (Y. MIWA).

Distr.—Formosa and Loo-Choo.

16. Lacon uraiensis MIWA

Trans. Nat. Nist. Soc. Formosa, XIX, No. 102, p. 231, (1929) (Formosa).

Reddish brown, little shining, clothed with yellowish grey hairs. Head impressed triangularly in the middle, closely punctured. Prothorax convex, with the sides rather parallel, punctured on the lateral parts of the pronotum like that of the head, but rather sparsely and finely set on the disk; hind angles somewhat paler, rather obtuse behind and not turned outwards; scutellum concave, nearly elliptical, coarsely punctulate. Elytra with punctured striae, the interstices very feebly but rather rugosely punctulate. Antennae brownish yellow, concolorous with the legs, the claws reddish. Resembles somewhat *L. sakaguchii* in general aspect, but this is much more smaller, the pronotum being relatively broad, quite parallel sided and the scutellum being nearly elliptical.

Length: 8 mm. Width: 2¾ mm.

Hab.—Urai (MIWA, ibid., 1929).

Distr.—Formosa.

17. Lacon microcephalus MOTSCHULSKY

vide fauna of Japan, p. 70.

Hab.—Musha 18-V, 15-VI, 1919 (J. SONAN); Nishimura 24-VIII, 1929 (Y. MIWA); Kuraru 1-IX, 1921 (T. ESAKI).

Distr.—Japan, Formosa, Indo-China, Philippines, Borneo, Sumatra, Bengal, Sikkim, Ceylon and Loo-Choo (Ôshima).

18. Lacon tumens CANDÈZE

vide fauna of Japan, p. 69.

Hab.—Kôshun (Trans. Nat. Hist. Soc. Formosa, XIX, No. 102, p. 232, 1929); Naihumpo 20-V, 1927 (K. KAMIYA).

Distr.—Japan, Formosa and Cambodja.

Genus PARALACON REITTER

Key to the Species

1. Pronotum without median canaliculation; elytra with variegated scales; pro- and meta-pleura with tarsal grooves..... .....*taciturnus*

1′. Pronotum with a median longitudinal canaliculation; elytra with unicolorous scales; pro- and meta-pleura without tarsal groove..... .....(2)
2. Pronotum and elytra differ in colour.....*argillaceus*
2′. Pronotum and elytra correspond in colour.....var. *davidi*

19. Paralacon taciturnus CANDÈZE

Rév. Mon., pp. 45 & 60, (*Lacon*) (1874) (Laos).—FLEUTIAUX, Ann. Soc. Ent. Fr., LXXXVII, p. 190, (*Lacon*) (1918) (Cambodja and Cochin-China).

—*colonicus* CANDÈZE Elat, Nouv., III, p. 8, (*Lacon*) (1881) (Cochin-China).—FLEUTIAUX, Ann. Soc. Ent. Fr., LXIII, p. 684, (*Lacon*) (1894) (Saigon).

=*koshunensis* MIWA, Trans. Nat. Hist. Soc. Formosa, XIX, No. 102, p. 233, (*Lacon*) (1929) (Formosa); ibid., No. 103, p. 344, (Loo-Choo).

Hab.—Kôshun and Baibara (MIWA, ibid., 1929); Sokutsu (Wien. Ent. Zeit., XLVII (2), p. 96, 1930); Kagi 28-VI, 1929 (Y. MIWA); 15-V, 1930 (Y. MIWA); Shinkwa 24-V, 1929 (Y. MIWA).

Distr.—Indo-China, Birma, Hainan, Formosa and Loo-Choo.

20. Paralacon argillaceus SOLSKY

Horae Soc. Ent. Ross., VII, p. 360, (*Lacon*) (1870) (East Siberia).—CANDÈZE, Rév. Mon. p. 209, (*Lacon*) (1874).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat, t. 1, f. 8, (*Lacon*) (1906).—FLEUTIAUX, Ann. Soc. Ent. Fr., LXXXVII, p. 191, (*Lacon*) (1918) (Indo-China).—MIWA, Trans. Nat. Hist. Soc. Formosa, XIX, No. 102, p. 233, (1929) (Formosa).

=*cinnamomeus* CANDÈZE, Rév. Mon., pp. 48 & 76, (*Lacon*) (1874) (Siberia); REITTER, Best.-Tab., 56, p. 6, (1905).—SCHWARZ, in WYTSMAN, Gen. Ins. 46, p. 316, (*Lacon*) (1907).—JAKOBSON, Žuki Rossiji, Pl. 39, f. 5, (1913).

var. **davidi** FAIRMAIRE (Pl. IX, f. 19), Ann. Soc. Ent. Fr. (5) VIII, p. 109, (*Lacon*) (1878) (Central China); LXXXVII, p. 191, (*Lacon*) (1918) (Tonkin, Cambodja, Yunnan and Corea).—MIWA, Trans. Nat. Hist. Soc. Formosa, XIX, No. 102, p. 233, (1929) (Formosa).

Hab.—Musha 18-V, 1919 (T. OKUNI); Kwarenkô 20-VII, 4-VIII, (T. ÔKUNI); Kammon IV, 1910 (I, NITOBE); Arisan 24-IV, 1928 (J. SONAN); Niitaka 12-V, 1928 (S. AOKI); Tattaka 20-V, 1924 (R. TAKAHASHI); Taataka 27-V, 1933 (M. CHÛJÔ); Jujiro on Mt. Arisan 26-IV, 1931 (T. SHIRAKI).

Distr.—Siberia, Mongolia, Corea, China, Indo-China and Formosa.

Genus COMPSOLACON REITTER

21. Compsolacon formosanus MIWA

Trans. Nat. Hist. Soc. Formosa, XIX, No. 102, p. 235, f. (*Neolacon*) (1929) (Formosa).

Black, shining, covered with short golden yellow pubescence. Head impressed triangularly between the antennae, densely but unevenly punctured. Prothorax convex, crenulate at the lateral margins; broadest at the middle part, gradually narrowing anteriorly as well as posteriorly, very densely and strongly punctured on the lateral parts of the pronotum, but rather sparsely on the disk, with a feeble median longitudinal channel on the disk, which is rather obsolescent in anterior part; hind angles pointed behind, rather turned outwards, with a long carina on each of them; scutellum nearly pentagonal, with scattered punctation. Elytra finely punctate-striate, the interstices irregularly punctured and partly rugose especially on the basal half. Antennae black, with distinct serration. Legs black, the claws reddish.

Length: 15 mm. Width: $4\frac{1}{3}$ mm.

Hab.—Baibara (MIWA, ibid., 1929); Kôsempo (Wien. Ent. Zeit., XLVII, (2), p. 91, 1930).

Distr.—Formosa.

Genus MERISTHUS CANDÈZE

Key to the Species

1. Prothorax with an oblique furrow on each pleuron to receive the anterior tarsus in situ; $2\frac{1}{2}$ mm.....*scobinula*
1′. Prothorax without such furrow; $4\frac{1}{4}$ mm.....*quadripunctatus*

22. Meristhus quadripunctatus CANDÈZE

Mon., I, pp. 162 & 163, (1857) (Sylhet and Assam); Ann. Mus. Genova, p. 671, (1888) (Birma).—PLEUTIAUX, Ann. Soc. Ent. Fr., LXXXVII, p. 189, (1918) (Tonkin).

Hab.—Tainan 28-VIII, 1932 (Y. MIWA).

Distr.—Sylhet, Assam, Birma, Tonkin and Formosa.

The locality Annam reported in the "Cat. Méthod. Elat., p. 26, 1891," is typographical error for Assam (after FLEUTIAUX, 1918).

23. Meristhus scobinula CANDÈZE

vide fauna of Japan, p. 70.

Hab.—Shinchiku VII, 1929 (Y. MIWA); Heitô 19-VIII, 1932 (Y. MIWA); Anping 1-VI, 1911 (H. SAUTER); Toroku 25-V, 1933 (Y. MIWA).

Distr.—Japan, China, Formosa, India, Texas, Mexico, Guatemala, Cuba and Columbia.

In Formosa, this minute species has been usually collected from cane-fields of a light sandy loam.

Subfamily HEMIRRHIPINAE FLEUTIAUX

Genus ALAUS ESCHSCHOLTZ

Key to the Species

1. Elytra emarginate or truncate at the extremities.....(2)
1′. Elytra normal at the extremities .....*berus*
2. Elytra transversely truncate at the extremities.....(3)
2′. Elytra crescently emarginate at the extremities.....*putridus*
3. Pronotum elongate, nearly oblong, with a median longitudinal elevation.....*elongatus*
3′. Pronotum not longer than wide, arched at sides, with a median elevation conspicuous only at the posterior part.....*mus*

24. Alaus putridus CANDÈZE

=*Alaus larvatus* CANDÈZE

=*Alaus pini* LEWIS

vide fauna of Japan, p. 71.

Hab.—Horisha, Musha, Taipin and Taihoku (Trans. Nat. Hist. Soc. Formosa, XIX, No. 102, p. 237, 1929); Kusukusu IV, 1928 (J. SONAN); Riyohen to Ratô 5-IX, 1929 (R. TAKAHASHI); Baikei 17-V, 1927 (K. KAMIYA).

Distr.—Japan, Bonin Islands, Loo-Choo, Formosa, China, Tonkin, Annam, Java and Malacca.

25. Alaus berus CANDÈZE

vide fauna of Japan, p. 71.

Hab.—Horisha and Musha (Trans. Nat. Hist. Soc. Formosa, XIX, No. 102, p. 238, 1929).

Distr.—Japan, Loo-Choo, Formosa and Laos.

26. Alaus elongatus MIWA

Trans. Nat. Hist. Soc. Formosa, XIX, No. 102, p. 237, (1929) (Formosa).

Wholly black, shining, thickly covered with variegated scales of grey and black. Head concave, coasely and unevenly punctured. Pronotum convex, nearly oblong, longitudinally elevated in the middle, very unevenly and somewhat strongly punctate, on the disk nearly in the middle is a pair of oblong black spots congested with black scales and on the basal rim immediately before the scutellum is a small projection, with the sides rather parallel

but somewhat sinuous; hind angles carinate, rather acuminate and turned outwards; scutellum concave, rather elongate and obtusely pointed behind. Elytra strongly punctate-striate, the interstices finely and rather evenly punctured, with the apices transversely truncate. Antennae pitchy black, rather opaque, the basal three joints shining. Legs piceous, thickly covered with greyish scales. This species resembles *A. putridus* CAND. in general outline but differs as follow:

Body relatively slender; pronotum without frontal protuberance; elytra lacking semicircular markings of scales, the apices of elytra transverse and not crescently emarginate.

Length: 28 mm. Width: 7½ mm.

Hab.—Baibara (MIWA, ibid., 1929).

Distr.—Formosa.

27. Alaus mus MIWA

Trans. Nat. Hist. Soc. Formosa, XIX, No. 102, p. 238, (1929) (Formosa).

♂, ♀. Wholly black, shining, densely covered with scales which are variegated with ashy grey and black. Head impressed triangularly in the middle, coarsely and unevenly punctate. Pronotum convex, very rugosely sculptured especially on the disk, with irregular and uneven punctures through the surface, rather distinctly elevated in the middle part near the basal margin; on the disk nearer the head than the base is a pair of oblong black spots congested with black scales and on the basal edge immediately before the scutellum is a small transverse nodule; hind angles rather acute, carinate and turned outwards; scutellum concave, nearly pentagonal. Elytra punctate-striate, the interstices minutely and unevenly punctured, with the apices transversely truncated. Antennae wholly black. Legs variegated with ashy and black scales. Last segment of abdomen in the female nearly trapezoidal, with its posterior margin emarginating transversely, while in the male nearly triangular. This species closely allied to *A. berus* CAND., but the body having more ashy scales, the longitudinal median ridge of the pronotum not so conspicuous and the apices of elytra emarginate.

Length: ♂ 26 mm. ♀ 28 mm. Width: ♂ 8 mm. ♀ 8½ mm.

Hab.—Arisan and Kwarenkô (MIWA, ibid., 1929); Habon 26-V, 1927 (T. AKASHI); Hinokiyama 20-V, 1933, (Y. IZUMI).

Distr.—Formosa.

Genus TETRIGUS CANDÈZE

28. Tetrigus lewisi CANDÈZE

vide fauna of Japan, p. 72.

Hab.—Sokutsu (Wien. Ent. Zeit., XLII, (2) p. 97, 1930).

Distr.—Japan, Corea, Loo-Choo, China and Formosa.

There is one specimen from Formosa in the collection of Kiushiu Imperial University, which has been collected at Kashinokidahira on Mt. Taiheizan by T. ESAKI.

Sabfamily OXYNOPTERINAE SCHENKLING

Genus PECTOCERA HOPE

29. Pectocera fortunei CANDÈZE

vide fauna of Japan, p. 72.

Hab.—Taihoku, Horisha and Rikiriki (Trans. Nat. Hist. Soc. Formosa, XIX, No. 102, p. 239, 1929); Kôsempo (Wien. Ent. Zeit., XLVII, (2) p. 97, 1930); Kusukusu 16~20-III, 1931 (T. SHIRAKI); Kuraru 12~15-III, 1931 (T. SHIRAKI).

Distr.—Japan, China, Loo-Choo and Formosa.

There is abundantly collected at Taihoku mostly in May, but in Kôshun district, the southern extremity of Formosa, it appears commonly in March. The species from Koshun having no maculate pubescence and seems to be a local variety of the former.

Subfamily CHALCOLEPIDIINAE SCHENKLING

Genus CAMPSOSTERNUS LATREILLE

Key to the Species

1. Pronotum with the both sides broadly and propleuron entirely, bright reddish ..... *gemma*
1′. Prothorax uuicolorous ..... (2)
2. Body violet blue, brilliant; pronotum blue and shining in the middle, mat and violaceous on the both lateral sides ..... *mirabilis*
2′. Body bluish green or sometimes black, brilliant; pronotum with the sides somewhat aenescent and rather mat ..... *auratus*

30. Campsosternus auratus DRURY

Illustr. Ins., II, p. 65, t. 35, f. 3, (*Elater*) (1773) (China).—HEYNE et TASCHENBERG, Exot. Käf., p. 154, t. 25, f. 19, (1908) (China).—FLEUTIAUX, Ann. Soc. Ent. Fr., LXXXVII, p. 200, (1918) (Tonkin, Annam and Cambodja).—MIWA,

Trans. Nat. Hist. Soc. Formosa, XIX, No. 102, p. 240, (1929) (Formosa); ibid., XXI, No. 116, p. 259, (1931) (Loo-Choo).

= *fulgens* OLIVIER, Ent., II, nr. 31, p. 12, t. 4, f. 43, (*Elater*) (1790) (China).—CANDÈZE, Mon., I, p. 345, (1857) (China).—BATES, Proc. Zool. Soc. Lond., p. 350, (*Camptosternus*) (1866) (Formosa).

var. **niger** FLEUTIAUX, Ann. Soc. Ent. Fr., LXXXVII, p. 200, (1918) (Tonkin).

Hab.—Nantô, Shinten, Kôshun, Shinchiku, Horisha, Kwarenkô, Hôzan and Kuraru (MIWA, ibid., 1929); Kankau, Kôsempo, Taihorin and Sokutsu (Wien. Ent. Zeit., 47, p. 97, 1930); Nantô, Shinten, Kôshun, Hoozan and Kuraru (Cat. Col. Formosa, p. 130, 1931); Karapai 2-VII, 1932 (T. MITONO); Shôtôka 30-VI, 1932 (T. MITONO); Kizantô 5-VII, 1932 (K. KOBAYASHI); Dômon near Kwarenkô VII, 1929 (Y. MIWA); Taihoku 24-VI, 1933 (J. SONAN).

Distr.—China, Hainan, Tonkin, Annam, Cambodja, Formosa and Loo-Choo.

31. Campsosternus gemma CANDÈZE (Pl. IX, f. 9)

Mon., I, p. 344, (1857) (Shanghai).—MIWA, Trans. Nat. Hist. Soc. Formosa, XIX, No. 102, p. 241, (1929) (Formosa).

var. **watanabei** MIWA, Ins. Mats, II, No. 1, p. 15, (1927) (Formosa); Trans. Nat. Hist. Soc. Formosa, XIX, No. 102, p. 241, (1929) (Formosa).

Hab.—Urai, Musha, Horisha, Baibara, Hoppo and Kayahara (MIWA, ibid., 1929); Kôsempo and Sokutsu (Wien. Ent. Zeit., 47, p. 97, 1930).

Distr.—China and Formosa.

32. Campsosternus mirabilis FLEUTIAUX

Bull. Mus. Hist. Nat. Paris, II, (4) p. 409, (1930) (Formosa).

Distr.—Formosa.

This species was collected by J. HARMAND in 1906 from Formosa, but has not been indicated an exact locality by the writer. The diagnosis rather corresponds to some colour modification of *C. gemma* CANDÈZE, in which the species with the pronotal markings darker and hardly perceptible. *C. gemma* widely distributed in Formosa and commonly found out everywhere and two individuals of the varieties corresponds to *C. mirabilis* are preserved in the Entomological Laboratory of Kiushiu Imperial University.

Subfamily DICREPIDIINAE FLEUTIAUX

Genus SEPHILUS CANDÈZE

33. Sephilus formosanus SCHWARZ

Deutsche Ent. Zeitschr., p. 319, (1902) (Formosa).—MIWA, Trans. Nat. Hist.

Soc. Formosa, XIX, No. 102, p. 242, (1929) (Formosa); ibid., XXIII, No. 124, p. 9, (1933) (Loo-Choo).

Hab.—Horisha and Kuraru (MIWA, ibid., 1929); Chip-Chip (Wien. Ent. Zeit., XLVII, (2) p. 97, 1930); Nisui VI, 1923 (S. ISSIKI); Nakanohira 15-VII, 15-VII, 1932 (T. MITONO).

Distr.—Formosa and Loo-Choo (Iriomote).

Subfamily CONODERINAE FLEUTIAUX

Genus ANATHESIS CANDÈZE

34. Anathesis laconoides CANDÈZE

Elat. nouv., I, p. 21, (1866) (Malay archipel.); Ann. Mus. Genova, p. 193, (1880) (New-Guinea); ibid., p. 673, (1888) (Birma); ibid., p. 486, (1894) (Sumatra).—FLEUTIAUX, Ann. Soc. Ent. Fr., LXXXVII, p. 205, (1918) (Laos, Tonkin, Bangkok and Hainan).—MIWA, Trans. Nat. Hist. Soc. Formosa, XIX, No. 102, p. 242, (1929) (Formosa).

Hab.—Kôshun and Kuraru (MIWA, ibid., 1929).

Distr.—Malacca, Sumatra, New-Guinea, Siam, Tonkin, Laos, Hainan and Formosa.

Genus AEOLODERMA FLEUTIAUX

Key to the Species

1. Elytra with some black longitudinal lines which are sometimes confluent and sometimes mostly obliterated; metasternum and abdomen fnscous.....*brachmana*
1′. Elytra with two large longitudinal bands which extend irregularly and very variable; metasternum and abdomen pale yellow .....*sinensis*

35. Aeoloderma brachmana CANDÈZE

Mon., II, pp. 283 & 345, (*Aeolus*) (1859) (Hindustan and Ceylon); Ann. Mus. Genova, p. 676, (*Heterodores*) (1888) (Birma); C. R. Soc. Ent. Belg., p. 150 (*Heterodores*) (1890) (Bengal).—FLEUTIAUX, Ann. Soc. Ent. Fr., LVIII, p. 140, (*Heterodores*) (1889) (Annam); ibid., LXXIV, p. 322, (*Aeolus*) (1905) (Pondichéry and Genji); ibid., LXXXVII p. 208, (*Aeolus*) (1918) (Tonkin); Encycl. Ent. Col., p. 34, (1929) (Indo-China).—MIWA, Trans. Nat. Hist. Soc. Formosa, XIX, No. 102, p. 243, (1929) (Formosa).

=*ancoralis* SCHWARZ, Deutsche Ent. Zeitschr., p. 24, (1901); p. 155, (1902).

=*pardus* CANDÈZE, Mon., II, p. 345, pl. 6, f. 34, (*Aeolus*) (1859) (India).

=*multilineatus* CANDÈZE, Ann. Mus. Genova, p. 118, (1878) (Celebes); ibid., p. 488, (1894) (Sumatra).—FLEUTIAUX, Philipp. Journ. Sc. p. 441. (*Aeolus*) (1914) (Philippines); Ann. Soc. Ent. Fr., LXXXVII, p. 208, (1918) (Java).

=*beccarii* (nec. CAND.) FLEUTIAUX, Philipp. Journ. Sc., p. 441, (1914) (Philippines).

=*vittatus* MATSUMURA, Mém. Soc. Ent. Belg., XVIII, p. 144, (*Aeolus*) (1911) (Formosa).

Hab.—Taichiu (Mém. Soc. Ent. Belg., p. 144, 1911); Taichiu, Nanto and Taihoku (Trans. Nat. Hist. Soc. Formosa, XIX, p. 243, 1929; Cat. Col. Formosa, p. 131, 1930).

Distr.—Ceylon, Hindustan, Bengal, Birma, Annam, Tonkin, Java, Sumatra, Borneo, Celebes, Philippines, China and Formosa.

36. Aeoloderma sinensis CANDÈZE.

Mon., II, pp. 283 & 346, (*Aeolus*) (1859) (Hongkong).—FLEUTIAUX, Encycl. Ent. Col., p. 34, (1929) (Indo-China).—MIWA, Trans. Nat. Hist. Soc. Formosa, XIX, No. 102, p. 243, (1929) (Formosa); ibid., XXI, No. 116, p. 259, (1931) (Okinawa); ibid., XXIII, No. 124, p. 9, (1933) (Iriomote).

=*pardus* (nec. CAND.) FLEUTIAUX, Ann. Soc. Ent. Fr., LXXXVII, p. 208, (1918) (Indo-China).

Hab.—Hôzan, Kôshun, Kagi and Taihoku (Trans. Nat. Hist. Soc. Formosa, XIX, No. 102, p. 243, 1929; Cat. Col. Formosa, p. 131, 1931); Toroku 25-V, 1933 (Y. MIWA); Heitô 5-IX, 1932 (Y. MIWA); Shinkwa 24-V, 1929 (Y. MIWA).

Distr.—China, Indo-China, Birma, Malacca, Bengal, Hindustan, Sumatra, Celebes, Formosa and Loo-Choo.

This species is usually considered to be a variety of the preceding species.

Genus HETERODERES LATREILLE

Key to the Species

1. Elytra spotted .....*triangularis*
1′. Elytra not spotted .....(2)
2. Each pronotal posterior angle with double carinae.....*albicans*
2′. Each pronotal posterior angle with a single carina.....(3)
3. Prothorax reddish, with the pronotum longitudinally infuscate on the disk; 4-4½ mm.....*intermedius*
3′. Prothorax not reddish; 7-8 mm.....*oblitus*

37. Heteroderes intermedius CANDÈZE

Elat. nouv., V, p. 32, (1893) (Borneo).—FLEUTIAUX, Ann. Soc. Ent. Fr., LXIII,

p. 686, (1894) (Indo-China); ibid., LXXXVII, p. 211, (1918) (Indo-China, Sumatra and Java).—MIWA, Trans. Nat. Hist. Soc. Formosa, XXI, No. 114, p. 88, (1931) (Formosa).

Hab.—Anping (Wien. Ent. Zeit., XLVII, (2) p. 97, 1930); Taihoku V, 1930 (S. MINOWA).

Distr.—Borneo, Sumatra, Java, Indo-China and Formosa.

38. Heteroderes triangularis ESCHSCHOLTZ

Entomogr., I, p. 73, (*Elater*) (1822) (Philippines).—CANDÈZE, Mon., II, pp. 353 & 361, (1859) (Philippines and China); Ann. Mus. Genova, XII, p. 118, (1878) (Malay); ibid., p. 193, (1880) & p. 488, (1894) (Sumatra); Cat. Method. Elat., p. 83, (1891) (India).—FLEUTIAUX, Ann. Soc. Ent. Fr., IX (6) p. 140, (1889) (Indo-China); ibid., LXXXVII, p. 210, (1918); Encycl. Ent. Col., p. 27, (1929).—MIWA, Trans. Nat. Hist. Soc. Formosa, XXI, No. 114, p. 88, (1931) (Formosa).

=*6-punctatus* MIWA, Ins. Mats., II, No. 1, p. 15, pl. I, f. 5, (1927) (Formosa); Trans. Nat. Hist. Soc. Formosa, XIX, No. 162, p. 245, (*Prodrasterius*) (1929) (Formosa).

var. **sacchari** MIWA, Ins. Mats., II, No. 1, p. 15, pl. I, f. 6, (1927) (Formosa); Trans. Nat. Hist. Soc. Formosa, XIX, No. 102, p. 245, (*Prodrasterius*) (1929),

var. **4-maculatus** MIWA, Trans. Nat. Hist. Soc. Formosa, XIX, No. 102, p. 245, (*Prodrasterius*) (1929) (Formosa).

var. **immaculatus** MIWA, Trans. Nat. Hist. Soc. Formosa, XIX, No. 102, p. 246, (*Prodrasterius*) (1929) (Formosa).

Hab.—Kyôshitô and Rinkiho (Ins. Mat., II, No. 1, p. 15, 1927); Kyôshitô, Rinkiho, Shinchiku, Musha and Sharoken (Trans. Nat. Hist. Soc. Formosa, XIX, No. 102, pp. 245 & 246, 1929); Taihorin, Kankau and Anping (Wien. Ent. Zeit., XLVII, (2) p. 97, 1930); Tauran 23-IV, 1910 (I. NITOBE); Shinkwa 5-VI, 1930 (Y. MIWA); Heitô 19-VIII, 1932 (Y. MIWA); Toroku 25-V, 1933 (Y. MIWA).

Distr.—India, Malay, Indo-China, China, Philippines, Borneo, Sumatra and Formosa.

39. Heteroderes albicans CANDÈZE

Elat. nouv., II, p. 23, (C. R. Soc. Ent. Belg., p. 83) (1878) (Siam).—FLEUTIAUX. Ann. Soc. Ent. Fr., IX, (6) p. 140, (1889) (Cambodja); ibid., LXXXVII, p. 210, (1918) (Indo-China); Encycl. Ent. Col., p. 25, (1929).—MIWA, Trans. Nat. Hist. Soc. Formosa, XIX, No. 102, p. 244, (1929) (Formosa).

Hab.—Horisha, Musha, Chipon, Kuraru and Shinkwa (Trans. Nat. Hist. Soc. Formosa, XIX, No. 102, p. 244, 1929); Pilam (Wien. Ent. Zeit., XLVII, (2) p. 97, 1930); Taitô 4-VII, 1927 (S. ISSIKI); Heitô VI, 1931 (Y. MIWA); Kagi 21-XI, 1926 (M. TOYOTA); Toroku 25-V, 1933 (Y. MIWA).

Distr.—Siam, Indo-China, China* and Formosa.

40. Heteroderes oblitus CANDÈZE

Mon., II, pp. 354 & 361, (1859) (India); Ann. Mus. Genova, p. 675, (1888) (Birma).—FLEUTIAUX, Ann. Soc. Ent. Fr., p. 210, (1918) (Indo-China).—MIWA, Trans. Nat. Hist. Soc. Formosa, XIX, No. 102, p. 244, (1929) (Formosa).

=*sacchari* MRTSUMURA, Mém. Soc. Ent. Belg., XVIII, p. 144, (*Agriotes*) (1911) (Formosa).

Hab.—Taihoku (MATSUMURA, ibid., 1911); Shinkwa, Arisan and Taihoku (MIWA, ibid., 1929); Toroku 25-V, 1933 (Y. MIWA).

Distr.—India, Birma, Indo-China and Formosa.

Genus **PRODRASTERIUS** FLEUTIAUX

41. Prodrasterius brahminus CANDÈZE

Mon., II, pp. 422 & 426, (*Drasterius*) (1859) (Himalaya); Ann. Soc. Ent. Belg., p. 489, (*Drasterius*) (1892) (Bengal).—FLEUTIAUX, Ann. Soc. Ent. Fr., IX, (6) p. 141, (*Drasterius*) (1889) (Indo-China); ibid., LXXXVII, p. 213, (*Drasterius*) (1918) (Indo-China); Encycl. Ent. Col., p. 36, (1929).—MIWA, Trans. Nat. Hist. Soc. Formosa, XIX, No. 102, p. 245, (1929) (Formosa).

=*drasteroides* FLEUTIAUX, Ann. Soc. Ent. Fr., p. 686, (*Heteroderes*) (1894).

=*bouqueti* FLEUTIAUX, ibid., p. 212, (*Drasterius*) (1918) (Indo-China).

Hab.—Rônô (MIWA, ibid., 1929).

Distr.—Himalaya, Bengal, Indo-China and Formosa.

Subfamily **ELATERINAE** SCHAUFUSS

Genus **ELATER** LINNAEUS

Key to the Species

1. Elytra bright reddish; pronotum dark chestnut brown, with a piar of oval spots ..... *bimaculatus*

1′. Prothorax and elytra entirely black, brilliant ..... (2)

2. Pronotum with a feeble canaliculation which is sometimes scarcely perceptible; legs black ..... *cambodiensis*

2′. Pronotum not canaliculate; legs reddish brown ..... *formosensis*

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* One specimen has been collected from Hainan by T. SHIRAKI in July, 1911.

42. Elater bimaculatus MIWA (Pl. IX, f. 4)

Trans. Nat. Hist. Soc. Formosa, XIX, No. 105, p. 487, (1929) (Formosa).

Body lustrous, wholly black on the ventral part, with tawny pubescence. Head black, convex, with a feeble impression in the middle; front brownish. Pronotum dark chestnut brown, with a pair of black oval spots, very evenly but sparsely punctured on the surface, having a feeble median longitudinal channel, with the sides slightly arched, the widest at the base, gradually narrowing anteriorly; hind angles rather obtusely acuminate behind, with a distinct carina; scutellum black, sparsely punctulate, with a median longitudinal carina. Elytra bright reddish, somewhat infuscate on the sutural interstices, markedly punctate-striate, the interstices conspicuously elevated, rather faintly and sparsely punctured. Antennae densely black, covered with black pubescence; from the third joint to the tenth being triangular and together forming a distinct serration. Legs black, the tarsi fuscous, the claws reddish.

Length: 12½ mm. Width: 3½ mm.

Hab.—Rantaizan (MIWA, ibid., 1929); Taiheizan 23-V, 1931 (Y. MIWA); Arisan V, 1932 (Y. MIWA).

Distr.—Formosa.

43. Elater cambodiensis FLEUTIAUX

Ann. Soc. Ent. Fr., LXXXVII, p. 214, (1918) (Cambodja).—MIWA, Trans. Nat. Hist. Soc. Formosa, XIX, No. 105, p. 487, (1929) (Formosa).

Hab.—Arisan (MIWA, ibid., 1929); Musha 18-V, 15-VI, 1919 (T. ÔKUNI); Taiheizan VII, 1930 (S. MINOWA), 9-VII, 1933 (M. CHÛJÔ); Tattaka 25-V, 1927 (K. KAMIYA).

Distr.—Cambodja and Formosa.

44. Elater formosensis MIWA

Trans. Nat. Hist. Soc. Formosa, XIX, No. 105, p. 487, (1929) (Formosa).

Black, brilliant, with golden grey pubescence. Head convex, densely and rather evenly punctured. Paothorax convex, widest at the base, gradually narrowing anteriorly, with a feeble scattered punctation on the pronotal disk, but somewhat denser on the lateral parts; hind angles acute and carinate. Elytra distinctly striate with strong punctation, the interstices feebly and sparsely punctulate. Antennae reddish brown, rather slender. Legs concolorous with the antenna, the claws reddish. Closely resembles *E. cambodiensis* FLEUT. in general outline, but differs from this as follows: Body having golden grey pubescence, the pronotum lacking channel and the legs reddish brown.

Length: 8½ mm. Width: 2½ mm.

Hab.—Musha (MIWA, ibid., 1929); Taiheizan 23-V, 1931 (Y. MIWA); Nakanohira 15-VII, 1932 (T. MITONO).

Distr.—Formosa.

Subgenus **PSEUDELATER** MIWA

45. Elater (Pseudelater) habunensis sp. nov. (Pl. IX, f. 13)

Black except the pronotum and pleuron bright reddish, shining, with the under surface pale reddish yellow except the black basal plates, having black, fine and rather sparse pubescence. Head convex, unevenly and rather coarsely punctured, the punctures much denser on the lateral part than the middle; front rather vertical and the carina obliterated in the middle part. Prothorax convex, slightly rounded at the sides, being the widest at the base and gradually narrowing anteriorly, with dense and uneven ocellate punctures on the pronotum, but the punctation much finer and sparser on the posterior corner; hind angles rather obtuse behind, each with an acute carina; scutellum small, rather transverse, coarsely punctured, but having a longitudinal scabrous surface free from punctation in the middle. Elytra striate with strong punctation, with rather close and bristle-like pubescence, the interstices raised, sparsely punctured, very feebly and rather transversely rugose. Antennae black, opaque, the second joint shortest, the third triangular, nearly as long as the following joint and corresponds in the shape. Legs black, the tarsi dark brown, the claws reddish. Sometimes black on the pronotal anterior half.

Length: 11-13 mm. Width: 3-3½ mm.

Hab.—Habun 13-V, 1933 (T. SHIRAKI): Holo- and Auto-type.

Two individuals have been collected by M. CHÛJÔ on May 12th and four by T. SHIRAKI on May 13th from the same locality, in 1933.

Genus **XANTHELATER** MIWA

Key to the Species

1. Body brownish yellow, rather narrow; elytra with the interstices finely granulated ..... *granulipennis*

1'. Body dusky fuscous, robust; elytra with the interstices markedly scabrous..... ..... *robustus*

46. Xantherater granulipennis MIWA

Trans. Nat. Hist. Soc. Formorsa, XIX, No. 105, p. 489, (*Elater*) (1929) (Formosa); ibid., XXI, No. 116, p. 259, (1931) (Loo-Choo).

Elongate, brownish yellow, rather opaque, with fulvous pubescence. Head convex, densely and coarsely punctured; frontal carina well marked and nearly semicircular. Pronotum convex, much longer than wide, rather parallel sided, slightly narrowing anteriorly, closely and rather evenly punctured on the whole surface, with a feeble median longitudinal channel; hind angles acute and somewhat turned outwards; scutellum conspicuously elevated and shaped like a prism. Elytra punctate-striate, the interstices elevated, covered with dense granulation and finely scabrous. Antennae rather slender, testaceous, the third joint nearly as long as the fourth and over twice as long as the second which is nearly globose. Legs testaceous.

Length: 14½ mm. Width: 3½ mm.

Hab.—Musha (MIWA, ibid., 1929); Baibara VII, 1926 (Y. MIWA).

Distr.—Formosa and Loo-Choo.

47. Xantherater robustus MIWA

Trans. Nat. Hist. Soc. Formosa, XIX, No. 105, p. 490 (*Elater*) (1929) (Formosa).

Fuscous, with griseous pubescence. Head slightly impressed triangularly between the antennae, very coarsely but closely punctured; frontal carina depressed in the middle. Pronotum convex, very densely punctured on the whole surface, being the widest at the base, gradually and gently narrowing anteriorly, with a longitudinal median channel which is rather obliterated anteriorly; hind angles acute and prolonged backwards; scutellum elongate, coarsely punctured. Elytra striate with distinct punctation, the interstices densely scabrous. Antennae dusky reddish, rather slender, the second joint small and globose, the third nearly as long as the fourth and longer by twice as the second. Legs yellow.

Length: 15 mm. Width: 4 mm.

Hab.—Mt. Niitaka (MIWA, ibid., 1929); Horisha VII, 1926 (Y. MIWA).

Distr.—Formosa.

Genus PENGAMENTHES FLEUTIAUX

Key to the Species

1. Each pronotal posterior angle with double carinae.....(2)
1′. Each pronotal posterior angle with single carina.....(3)
2. Pronotum with a pair of compressed projections on the disk near the base; antennae with the second and third joints short, the fourth longer than the preceding two joints combined.....*bispinicollis*
2′. Pronotum without any projection; antennae with the third joint much longer than the second and similar to the fourth in shape.....*bicarinatus*

3. Second and third joints of antennae nearly equal in size and shape; pronotum and elytra with neither marking nor stripe.....*oblongicollis*
3′. Third joint of antennae longer than the second; lateral margin of pronotum and outer margin of elytra black.....*parallelaris*

48. Pengamethes bicarinatus LEWIS

vide fauna of Japan, p. 84.

Hab.—Baibara (Trans. Nat. Hist. Soc. Formosa, XIX, No. 105, p. 494, 1929); Taihorin (Wien. Ent. Zeit., XLVII, (2) p. 91, 1930).

Distr.—Japan and Formosa.

The elytron of the typical specimen obliquely truncate at the extremity, but the one from Formosa not acutely truncate, but rather circularly produced.

49. Pengamethes bispinicollis MIWA (Pl. IX, f. 2)

Trans. Nat. Hist. Soc. Formosa, XIX, No. 105, p. 488, (*Elater*) (1929) (Formosa).

Elongate, fuscous, with tawny pubescence. Head convex, strongly and somewhat coarsely punctured, with a pair of foveae between the eyes. Prothorax convex, elongate, rather longer than wide, the widest at the base, gradually and gently narrowing anteriorly, very closely but rather unevenly punctured on the lateral parts of the pronotum, but somewhat sparsely on the disk, with a pair of compressed projections in the middle near the base; hind angles large, acuminate behind and turned outwards, with double acute carinae on each of them; scutellum elongate, convex, narrowing posteriorly and pointed behind. Elytra punctate-striate, the interstices densely granulated and markedly scabrous, with the apical extremities emarginate. Antennae reddish, rather slender and nearly as long as the head and prothorax combined, the second and third joints small, from the fourth to tenth together forming a serration. Legs bright chestnut brown.

Length: 16½–17½ mm. Width: 3⅜–4 mm.

Hab.—Baibara and Suisha (MIWA, ibid., 1929).

Distr.—Formosa.

50. Pengamethes parallelaris MIWA

Ins. Mats., II, No. 1, p. 21, Pl. I, f. 18, ♀, (*Megapenthes*) (1927) (Formosa); Trans. Nat. Hist. Soc. Formosa, XIX, No. 105, p. 492, (1929) (Formosa).

Elongate, rather parallel sided, chestnut brown, covered with fine griseous pubescence. Head convex, closely punctured; frontal carina well marked, nearly semicircular. Prothorax convex, much longer than wide, being the widest

at the base, gradually but very slightly narrowing anteriorly, with the sides narrowly infuscate on the pronotum, very closely and rather evenly punctured among the minute scabrous, but the punctures much denser on the lateral part than on the disk; hind angles prolonged backwards, rather acuminate behind and acutely carinate. Elytra somewhat paler, punctate-striate, the interstices rather flattened, coarsely scabrous, on the sixth to external margin infuscate, but gradually paler to the apical part. Antennae brownish yellow, slender and very long, the second joint smallest and globose, the third nearly obconical and thrice longer than the second. Legs concolous with the antenna.

Length: 10 mm. Width: 2¼ mm.

Hab.—Kyûhabon (MIWA, ibid., 1927); Kyûhabon, Baibara and Hinokiyama (MIWA, ibid., 1929).

Distr.—Formosa.

51. Pengamethes oblongicollis MIWA

Trans. Nat. Hist. Soc. Formosa, XIX, No. 105, p. 492, (1929) (Formosa).

Elongate, rather parallel sided, covered with tawny pubescence. Head impressed on the frontal part, densely but coarsely punctured. Pronotum oblong, convex, with dense punctation; hind angles prolonged backwards, with a distinct carina on each ot them. Elytra with punctured striae, the interstices densely granulated and finely scabrous, with the apices obliquely emarginate. Antennae slender, much longer than head and prothorax combined. Legs somewhat darker, the claws brownish yellow.

Length: 10½ mm. Width: 2½ mm.

Hab.—Kusukusu and Baibara (MIWA, ibid., 1929).

Distr.—Formosa.

Genus MEGAPENTHES KIESENWETTER

Key to the Species

1. Third joint of antennae nearly as long as the second; body bright castaneous, without any marking; 6 mm.....*koshunensis*
1′. Third joint of antennae longer than the second.....(2)
2. Body black, with more or less fuscous tint, rather opalescent; elytra with reddish tint at the base.....(3)
2′. Body black, not shining; elytra with yellowish stripe.....*ligatus*
3. Body robust; pronotum with double carinae on each hind angle; 12½ mm.....*horishanus*
3′. Body slender; pronotum with a single carina on each hind angle; 8 mm...*sonami*

52. Megapenthes ligatus CANDÈZE (Pl. IX, f. 1)

Ann. Mus. Genova, XII, p. 124, (1878) (Sumatra); ibid., p. 677, (1888) (Borneo and Birma); Cat. Elat., p. 97, (1891) (China).—FLEUTIAUX Ann. Soc. Ent., Fr., p. 687, (1894) (Cochin-China); ibid., p. 574, (1902) (Tonkin); ibid., LXXXVII, p. 251, (1918) (Tonkin and Formosa); Encycl. Ent. Col., p. 63, (1929).—SCHWARZ, in WYTSMAN, Gen. Ins. 46, Elat., p. 123, (1906) (Sumatra and Java).—MIWA, Trans. Nat. Hist. Soc. Formosa, XIX, No. 105, p. 493, (1929) (Formosa).

=*suturalis* MATSUMURA, Mém. Soc. Ent. Belg., XVIII, p. 145, (*Ludius*) (1911).

Hab.—Taihoku, Shinten, Urai, Maruyama, Sharyôtô, Ranrun, Rantaizan, Horisha, Nishimura, Shinkwa and Kôshun (MIWA, ibid., 1929); Kôsempo and Alikang (Wien. Ent. Zeit., XLVII, (2) p. 97, 1930); Takezaki 3–V, 1931 (T. SHIRAKI); Shônôryô 30–IV, 1931 (T. SHIRAKI); Kappanzan 29–V, 1932 (T. SHIRAKI); Sôzan 5–VII, 1932 (Y. MIWA); Hokutô 18–IV, 1929 (H. SATÔ).

Distr.—Sumatra, Borneo, Java, Birma, Tonkin, Cochin-China, Hongkong and Formosa.

FLEUTIAUX reported in 1918, that he has possessed this species collected from Japan, but this is not yet discovered from the same locality by the author.

53. Megapenthes koshunensis MIWA

Trans. Nat. Hist. Soc. Formosa, XIX, No. 105, p. 494, (1929).

Bright castaneous, little shining, with fulvous pubescence. Head convex, densely punctured, frontal carina well marked and semicircular. Pronotum convex, longer than wide, somewhat sinuous sided, slightly narrowing anteriorly from the base, very densely punctured on the surface; hind angles acute, prolonged behind, each with a distinct carina. Elytra punctate-striate, the interstices finely granulated. Antennae yellow, the second joint nearly as long as the third, from the fourth joint to the tenth forming a serration. Legs concolorous with the antenna.

Length: 6 mm. Width: 1½ mm.

Holotype was collected from Kôshun district in May, 1918.

Distr.—Formosa.

54. Megapenthes sonami MIWA

Trans. Nat. Hist. Soc. Formosa, XIX, No. 105, p. 494, (1929).

Elongate, parallel, brownish black, rather opaque, with tawny pubescence. Head convex, densely punctured, frontal carina semicircular. Prothorax convex, much longer than wide, being the widest at the base, slightly narrowing anteriorly, very evenly and rather finely punctured among the dense and minute granula-

tion on the whole surface, with a median feeble longitudinal canaliculation which is rather obliterated anteriorly; hind angles acute, with a conspicuous carina. Elytra with reddish tint at the base, punctate-striate, the interstices finely granulated. Antennae fuscous, rather slender, the second joint smallest and nearly globose, the third joint slightly longer than the second, the fourth nearly as long as the preceding two joints combined, from the fourth joint to the tenth forming a feeble serration. Legs yellow.

Length: 8 mm. Width: 2 mm.

Holotype was collected from Shinchiku district in July, 1918.

Distr.—Formosa.

55. Megapenthes horishanus MIWA

Trans. Nat. Hist. Soc. Formosa, XIX, No. 105, p. 489, (1929) (Formosa).

Fuscous black, with twany pubescence. Head convex but slightly excavate in the middle, very closely punctured; frontal carina conspicuously semicircular. Pronotum convex, rather longer than wide, being the widest at the base, gradually and gently narrowing anteriorly, with a feeble median longitudinal channel which is rather obsolescent anteriorly, very closely and rather evenly punctured on the minute scabrous surface; hind angles prolonged backwards, rather acute and somewhat paler coloured, each with distinct double carinae; scutellum triangular and nearly like that of *E. granulipennis*. Elytra with reddish tint at the base, punctate-striate, the interstices rather markedly scabrous. Antennae slender, yellowish, the second joint smallest and globose, the third nearly half as long ss the second and fourth combined. Legs pale yellow.

Length: 12½ mm. Width: 3½ mm.

Hab.—Horisha (MIWA, ibid., 1929).

Distr.—Formosa.

Genus MELANOXANTHUS ESCHSCHOLTZ

Subgenus MELANOXANTHUS s. str.

Key to the Species

1. Elytra more or less spotted or bicolour.....(2)
1′. Elytra unicolour, not spotted.....(4)
2. Pronotum not spotted.....(3)
2′. Body bright orange yellow; head, the anterior middle part of pronotum longitudinally and the apical part of elytra black; 8–9½ mm.....*melanocehpalus*
3. Black, rather opalescent; elytra with fine yellowish spots; 9 mm.....*montivagus*
3′. Dusky fuscous black; elytra with confluent yellowish stripes; 5½–6½ mm...*amianus*

4. Prothorax and legs yellowish; others black; 5 mm.....*luzonicus*
4′. Prothorax and legs ferrugineous; head and under-surface (sometimes abdomen castaneous) entirely ferrugineous; 9–10 mm.....*nigripennis*

57. Melanoxanthus melanocephalus FABRICIUS

Spec. Ins., I, p. 272, (*Elater*) (1781) (India); Mant. Ins., I, p. 174, (*Elater*) (1787); Ent. Syst., I, 2, p. 229, (*Elater*) (1792); Syst. Eleuth., II, p. 239, (*Elater*) (1801).—THUNBERG, Novae Ins. Sp., III, p. 63, (*Elater*) (1784).—OLIVIER, Ent., II, gen. 31, p. 41, tab. 4, f. 36 9-b, (*Elater*) (1790).—HERBST, Käf., X, p. 111, tab. 168, f. 10 & 10 b, (*Elater*) (1806).—GERMAR, Zeitschr. Fnt., V, p. 191, (*Elater*) (1844).—BATES, Proc. Zool. Soc. Lond., p. 350, (1866) (Formosa).—CANDÈZE, Mon., II, p. 512, t. 7, f. 12 & 12 a, (1859) (South Asia, Arabia, China, Madagascar, Maurice and Bourbon); C. R. Soc. Ent. Belg., p. 124, (1875) (Philippines); Ann. Mus. Genova, XII, p. 125, (1878) (Celebes); ibid., p. 194, (1880) (Sumatra); ibid., p. 777, (Birma).—FLEUTIAUX, Ann. Soc. Ent. Fr., p. 143, (1889) (Cochin-China); ibid., p. 323, (1905) (South Hindustan); ibid., p. 221, (1918) (Tonkin, Siam, Ceylon, Borneo, New-Zealand, Zanzibar, Sierra-Leone and Brasil).—ALLUAUD ap. GRANDIDIER, Hist. Madag., XXI, p. 217, (1902) (Madagascar, Mascareignes and Sechelles).—MIWA, Trans. Nat. Hist. Soc. Formosa, XIX. No. 103, p. 345, (1929) (Loo-Choo); ibid. No. 105, p. 491, (1929) (Formosa).

Hab.—Kagi and Shinkwa (MIWA, ibid., 1929); Anping (Wien. Ent. Zeit., XVVII, (2), p. 97, 1930).

Distr.—Arabia. Madagascar, Maurice, Bourbon, Comores, Mascareignes, Séchelles, Zanzibar, India, Ceylon, Birma, Borneo, Sumatra, Siam, Indo-China, China, Formosa, Loo-Choo, Philippines, Celebes, New-Zealand, Sierra-Leone and Brasil.

57. Melanoxanthus montivagus MIWA (Pl. IX, f. 17)

Trans. Nat. Hist. Soc. Formosa, XIX, No. 105, p. 491, (1929) (Formosa).

Black, with somewhat opalescent tint or azurescence, fine testaceous pubescent. Head convex, finely and evenly punctured. Prothorax convex, the widest at the base, gradually and gently narrowing anteriorly; very finely and rather evenly punctured on the pronotum, but the punctation much denser on the lateral part than on the disk, with a feeble median longitudinal canaliculation on the pronotum; hind angles rather prolonged backwards and pointed behind, with a conspicuous carina; scutellum narrowing posteriorly and pointed at the apex. Elytra punctate-striate, the interstices coarsely punctured, with a yellowish tint on each humeral part, which commences on the second interstices and gradually widening to the third, then suddenly widened and continuing in the same

breadth to the seventh, on a little posterior part from this marking is a yellowish circular spot occupying the second, third and a small part of fourth interstices, besides a yellowish band being nearly in the centre between the upper spot and the apex of the elytron, which occupies a part of the third and entire on the fourth to eighth interstices. Antennae dark brown, three basal joints paler. Legs bright yellow.

Length: 9 mm. Width: $2\frac{1}{2}$ mm.

Hab.—Arisan, Kwarenkô and Kayahara (MIWA, ibid., 1929); Kôsempo (Wien. Ent. Zeit., XLVII, (2) p. 91, 1930); Taiheizan 9-VII, 1933 (M. CHÛJÔ).

Distr.—Formosa.

58. Melanoxanthus nigripennis FLEUTIAUX

Encycl. Ent. Col., p. 52, (1929) (Tonkin); Wien. Ent. Zeit., XLVII, p. 97, (1930) (Formosa).

Hab.—Kôsempo (FLEUTIAUX, ibid., 1930).

Distr.—Formosa and Tonkin.

59. Melanoxanthus luzonicus FLEUTIAUX

Philip. Journ. Sc., (D) IX, p. 444, (1914) (Luzon); Wien. Ent. Zeit., XLVII, p. 97, (1930) (Formosa).

One specimen collected from Kôtôsho, closely corresponds to the original colouration, but the body much shorter and measured 4 mm.

Hab.—Taihorin (FLEUTIAUX, ibid., 1930); Kôtôsho 20-VII, 1912 (T. SHIRAKI).

Distr.—Philippines and Formosa.

60. Melanoxanthus amianus sp. nov. (Pl. IX, f. 10)

Fuscous black, rather dusky, covered with fine fulvous pubescence. Head slightly convex, with dense and ocellate punctures, the frontal carina well marked and semicircular. Prothorax with the anterior margin narrowly brownish, convex, the widest at the base, gradually narrowing anteriorly, rather straight at the sides, very closely and rather reticulately punctate, but slightly scabrous on the hind angles; hind angles acute and pointed behind, with a distinct carina; scutellum tongue-shaped, minutely punctulate. Elytra punctate-striate, the interstices rather convex, densely granulated, with the sutural interstices brownish yellow and having three elongate spots on each elytron. The first spot occupying the humeral part from the third to sixth interstices, the second one nearly elliptical, commences on the fourth interstice and extending to the sixth, which is often confluent with the preceding spot on the fourth interstice, the last spot nearly elongate oval and isolated just in the centre of one third

apical part of elytron, occupying a small part of the third and entire fourth to sixth interstices. Antennae dark reddish brown, but much paler on three basal joints, very hairly, the second and third joints nearly equal in length. Legs castaneous yellow.

Length: $5\frac{1}{2}$–$6\frac{1}{2}$ mm. Width: $1\frac{1}{4}$–$1\frac{3}{8}$ mm.

Six specimens have been collected from Kwarenkô district by Mr. J. SONAN in July, 1919 and two from Arisan in May, 1930.

Subgenus **GANOXANTHUS** FLEUTIAUX

61. Melanoxanthus (Ganoxanthus) quadriguttatus MIWA (Pl. IX, f. 22)

Ins. Mats., II, No. 1, p. 21, pl. I, f. 19, (1927) (Formosa).

Parallel, convex, with fine black pubescence. Head black, densely punctured; frontal carina well marked. Prothorax yellowish; punctured like that of the head on the lateral part, rather evenly and much sparsely on the disk, with a pair of black circular spots on the anterior part, a far smaller oval spot occupying below, a black spot again on each side of the anterior part along the border. Elytra black, punctate-striate, interstices densely punctured, with a basal pale yellow spot occupying the upper part of the second, third and fourth interstices, which extends to a part of the fifth, at the midway between the middle and the apex of the elytron with a transverse fascia which extends from the second to ninth interstices almost in the same width. Antennae black. Legs yellow.

Length: 12 mm. Width: 3 mm.

Holotype was collected from the cane field at Horisha.

Distr.—Formosa.

Subfamily **PHYSORRHININAE** FLEUTIAUX

Genus **ANCHASTUS** LECONTE

62. Anchastus castelnaui CANDÈZE

Elat. nouv., II, p. 24, (Ann. Soc. Ent. Belg., XXI, p. 84) (1878) (Bangkok).—FLEUTIAUX, Ann. Soc. Ent. Fr., LXXXVII, p. 224, (1918) (Laos); Wien. Ent. Zeit., XLVII, (2) p. 97, (1930) (Formosa).

Hab.—Taihorin (FLEUTIAUX, ibid., 1930); Taiheizan VII, 1930 (S. MINOWA); 9-VIII, 1933 (M. CHÛJÔ).

Distr.—Siam, Laos, Formosa and Loo-Choo (Ôshima).

Subfamily HYPNOIDINAE FLEUTIAUX

Genus HYPNOIDUS STEPHENS

63. Hypnoidus cryptohypnoidus MIWA

Trans. Nat. Hist. Soc. Formosa, XX, No. 106, p. 6, (*Paracardiophorus*) (1930).

Black, shining, with fine fulvous pubescence. Head convex, rather evenly punctulate. Prothorax convex, very minutely, sparsely but rather evenly punctulate, being the widest at the base, gradually narrowing anteriorly, with the sides slightly arched; hind angles short, acute but not carinate; scutellum nearly cordate, slightly excavated. Elytra fuscous, punctate, the interstices rather elevated, densely but feebly punctured and rather transversely rugose, with the humeral part somewhat paler. Antennae and legs pale yellow.

Length: 3½ mm. Width: 1 mm.

Holotype was collected from Shinchiku district in July, 1918.

Distr.—Formosa.

Genus ZOROCHRUS C. G. THOMSON

Key to the Species

1. Scutellum convex but not elevated longitudinally; pronotum granulated anteriorly, with a fine longitudinal carina in the middle.....*curatus*
1′. Scutellum longitudinally elevated in the middle; pronotum finely punctured, with a longitudinal smooth line in the middle.....*nitobei*

64. Zorochrus curatus CANDÈZE

vide fauna of Japan, p. 91.

Hab.—Musha and Taitô (Trans. Nat. Hist. Soc. Formosa, XX, No. 106, p. 2, 1930); Taiheizan VII, 1930 (S. MINOWA).

Distr.—Japan and Formosa.

65. Zorochrus nitobei MIWA

Trans. Nat. Hist. Soc. Formosa, XX, No. 106, p. 2, (*Hypnoidus*) (1930) (Formosa).

Black, with somewhat bronzy shining, clothed with fine griseous pubescence. Head convex, densely and rather coarsely punctate; frontal carina raised and nearly semicircular. Pronotum convex, somewhat arched at sides, with a longitudinal median carina, dense and rather even punctation on the surface, but the punctation much denser on the lateral part than on the disk; hind angles acute and slightly turned outwards, each with a distinct carina; scutellum nearly triangular and longitudinally elevated in the middle. Elytra punctate-striate, the

interstices finely and closely punctulate. Antennae brownish yellow. Legs concolorous with the antennae. Resembles somewhat *C. telluris* LEW. in general outline, but the scutellum of this species angulate, with a longitudinal elevation in the middle and shaped like two sides of a prism.

Length: 4 mm. Width: 1½ mm.

Hab.—Rônô (MIWA, ibid., 1930).

Distr.—Formosa.

Genus QUASIMUS GOZIS

Key to the Species

1. Body elliptical or oval.....(2)
1′. Body elongate, rather slender.....(4)
2. Body dark brown, shining, with golden grey pubescence; legs brownish yellow; 1⅔ mm.....*shirakii*
2′. Body black, shining, with griseous pubescence; legs black.....(3)
3. Body oval.....*ovalis*
3′. Body elliptical.....*ellipticus*
4. Body fuscous, with greyish pubescence; scutellum nearly cordate; legs pale yellow; 2⅓ mm.....*luteipes*
4′. Body black, with cinereous pubescence; scutellum nearly triangular and circularly excavated; legs dark brown; 1¼ mm.....*horishanus*

66. Quasimus shirakii MIWA

Trans. Nat. Hist. Soc. Formosa, XX, No. 106, p. 3, (1930) (Formosa).

Dark brown, shining, covered with fine golden grey pubescence. Head convex, finely and densely punctulate. Pronotum convex, broader than long, very finely and rather evenly punctured, with the sides well margined and arched; hind angles relatively long, acute and prolonged backwards beyond the humeral angles of elytra, each with a conspicuous carina which is somewhat sinuate and extends to the anterior margin; scutellum nearly circular and concave. Elytra narrower than prothorax, with fine but uneven punctation. Antennae and legs brownish yellow.

Length: 1⅔ mm. Width: ⅔ mm.

Holotype was collected from Arisan on April 29, 1917.

Distr.—Formosa.

67. Quasimus horishanus MIWA

Trans. Nat. Hist. Soc. Formosa, XX, No. 106, p. 4, (1930).

Black, rather opaque, with ashy pubescence. Head convex, closely and minutely punctulate. Pronotum nearly spherical convex, very finely and rather

evenly punctulate; hind angles acute and prolonged backwards, each with a conspicuous carina extending from the base to the anterior margin; scutellum obtuse triangular and circularly impressed in the middle. Elytra nearly as broad as prothorax, with fine but somewhat uneven punctation. Antennae and legs dark brown.

Length: 1¼ mm. Width: ⅜ mm.

Hab.—Horisha (Holotype), Musha, Hinokiyama, Kayahara and Tombara (MIWA, ibid., 1930).

Distr.—Formosa.

68. Quasimus luteipes CANDÈZE

vide fauna of Japan, p. 92.

Hab.—Horisha (MIWA, Trans. Nat. Hist. Soc. Formosa, XX, No. 106, p. 4, 1930).

Distr.—Japan and Formosa.

69. Quasimus ovalis CANDÈZE

vide fauna of Japan, p. 93.

Hab.—Kôshun and Musha (MIWA, Trans. Nat. Hist. Soc. Formosa, XX, No. 106, p. 3, 1930).

Distr.—Japan, Formosa and Sumatra.

70. Quasimus ellipticus CANDÈZE

vide fauna of Japan, p. 93.

Hab.—Sôzan 3-VI, 1932 (Y. MIWA and M. CHÛJÔ).

Distr.—Japan and Formosa.

This is abundantly collected in June on the planting bed of Nagi-tree. The body length of this species is very variable

Subfamily **ESTHESOPINAE** FLEUTIAUX

Genus **CARDIOHYPNUS** FLEUTIAUX

71. Cardiohypnus coomani FLEUTIAUX

Bull. Soc. Ent. Fr., p. 185, (*Cardiophorus*) (1925) (Tonkin); ibid., p. 81, (1926); ibid., pp. 284-286, f. 1 & 2, (1928) (Tonkin); Bull. Soc. Zool. Fr., LVI, p. 307, (1931) (Tonkin, Formosa and Himalaya).

=*sonani* MIWA, Trans. Nat. Hist. Soc. Formosa, XX, No. 106, p. 11, (1930) (Formosa).

Hab.—Taihoku (MIWA, ibid., 1930); Toroku 25-V, 1933 (Y. MIWA).

Distr.—Tonkin, Formosa and Himalaya.

About two dozen specimens have been collected by the author from the cane-fields of light sandy loam in Toroku district, Formosa.

Genus **PHOROCARDIUS** FLEUTIAUX

Key to the Species

1. Elytra with yellowish longitudinal band.....*comptus*
1′. Elytra unicolorous.....*yanagiharae*

72. Phorocardius comptus CANDÈZE

Mon., III, p. 202, (*Cardiophorus*) (1860) (S. Hindustan).—FLEUTIAUX, Ann. Soc. Ent. Fr., p. 328, (*Cardiophorus*) (1905) (Nilohiris Coonour, 1500 m. alt.).—MIWA, Ins. Mats., II, No. 2, p. 108, (*Cardiophorus*) (1927) (Formosa).

Hab.—Rônô (MIWA, ibid., 1927; Trans. Nat. Hist. Soc. Formosa, XX, No. 106, p. 8, 1930).

Distr.—South Hindustan and Formosa.

73. Phorocardius yanagiharae MIWA

Ins. Mats., II, No. 2, p. 109, f. 5, (*Cardiophorus*) (1927) (Formosa).

Hab.—Tainan (MIWA, ibid., 1927; Trans. Nat. Hist. Soc. Formosa, XX, No. 106, p. 8, 1930; Wien. Ent. Zeit., XLVII, (2) p. 91, 1930); Heitô V-VI, 1931, (Y. MIWA).

Distr.—Formosa.

Genus **CARDIOPHORUS** ESCHSCHOLTZ

Key to the Species

1. Prothorax with fine curved furrow under the lateral border of pronotum.....(2)
1′. Prothorax without curved furrow.....(3)
2. Elytra twice as long as head and prothorax combined.....*cervilis*
2′. Elytra twice as short as the length of head and prothorax combined.....*sonani*
3. Prothorax reddish, with a carina on each pronotal posterior angle; elytra black, with two yellowish fasciae.....*carduelis*
3′. Prothorax fuscous, without carina on the pronotal posterior angles; elytra reddish brown.....*baibarasanus*

74. Cardiophorus cervilis CANDÈZE

Mon., III, p. 203, (1860) (Bengal).—MIWA, Ins. Mats., II, No. 2, p. 108, (1928) (Formosa).

Hab.—Shôkwa and Kôshun (MIWA, ibid., 1927; Trans. Nat. Hist. Soc. Formosa, XX, No. 106, p. 9, 1930).

Distr.—Bengal and Formosa.

The species which has been reported as *C. cervilis* CAND., by E. FLEUTIAUX from Tonkin and Cambodja in 1889 was new and described by the same author as *C. confusus* in 1918, so that the habitat Indo-China must be rejected from the distribution list of this species.

75. Cardiophorus carduelis CANDÈZE

Elat. nouv., I (Mém. Acad. Belg., XVII, 1863) p. 39, (1864) (Singapore).—FLEUTIAUX, Ann. Soc. Ent. Fr., p. 226, (1918) (Cochin-China, Cambodja, Java and Sumatra).

=*anticus var.*, FLEUTIAUX, Ann. Soc. Ent. Fr., p. 327, note 2, (1905).

=*rufithorax* MIWA, Trans. Nat. Hist. Soc. Formosa, XX, No. 106, p. 10, (1930) (Formosa).

Hab.—Horisha, Taihoku and Kôsempo (MIWA, ibid., 1930); Kôsempo (Wien. Ent. Zeit., XLVII, (2) p. 97, 1930); Shinkwa 18-VI, 1930 (Y. MIWA).

Distr.—Singapore, Cochin-China, Cambodja, Sumatra, Java and Formosa.

E. FLEUTIAUX treated this species under the subgenus *Paracardiophorus*, in which the lateral margin of pronotum is perfect and conspicuous. In Formosan species the author has observed the prothorax having neither perfect lateral margin nor curved furrow, but shortly margined near the hind angles. This must be included in the genus *Cardiophorus*.

76. Cardiophorus sonani MIWA

Trans. Nat. Hist. Soc. Formosa, XX, No. 106, p. 9, (1930) (Formosa).

Brownish yellow, shining, clothed with fine griseous pubescence. Head convex, densely and coarsely punctate; frontal carina well marked and arched anteriorly. Pronotum convex, very finely and evenly punctulate, with the sides well arched, the basal furrow scarcely perceptible; hind angles relatively short, somewhat acuminate and carinate; scutellum rather broad, deeply foveolate anteriorly. Elytra with punctured striae, the interstices somewhat raised, feebly and minutely punctulate. Antennae brownish yellow, rather slender and longer than head and prothorax combined. Legs paler.

Length: 7½ mm. Width: 2¼ mm.

Hab.—Shinchiku, Musha and Kôshun (MIWA, ibid., 1930); Kanshirei 1-VII, 1928 (R. TAKAHASHI); Arisan 7-VII, 1929 (Y. MIWA).

Distr.—Formosa.

It has been described as the claw toothed in the original description, but this is a typographical error for not toothed.

77. Cardiophorus baibarasanus MIWA

Trans. Nat. Hist. Soc. Formosa, XX, No. 106, p. 10, (1930) (Formosa).

Reddish brown, little shining, with fine cinereous pubescence. Head excavated triangularly between the antennae, very closely but rather coarsely punctured, the frontal carina distinct, arched anteriorly and angulated before the eyes. Prothorax sometimes fuscous, convex and rather parallel sided, with a feeble median longitudinal channel, being very closely and rather minutely punctulate, the basal furrow mostly obliterated; hind angles short and prolonged backwards; scutellum concave, feebly foveolate anteriorly. Elytra punctate-striate, the interstices raised, finely but rather unevenly punctulate, with the sutural and outher margins sometimes infuscate. Antennae slender, from the third joint to the tenth triangular and together forming a feeble serration. Legs somewhat paler; claws not toothed.

Length: 9 mm. Width: 2¼ mm.

Hab.—Baibara (MIWA, ibid., 1930); Sankakuyu 3-IV, 1919 (J. SONAN).

Distr.—Formosa.

Genus PARACARDIOPHORUS SCHWARZ

78. Paracardiophorus devastans MATSUMURA

Mém. Soc. Ent. Belg., XVIII, p. 145, (*Cardiophorus*) (1911) (Formosa).

Hab.—Taihoku (MATSUMURA, ibid., 1911); Kôshun, Horisha, Taitô and Musha (MIWA, ibid., 1929); Anping (MIWA, Wien. Ent. Zeit., XLVII, (2) p. 92, 1930); Tainan 19-V, 1917 (?); Shinten VIII, 1920 (S. INAMURA); Tarowan 23-V, 1927 (K. KAMIYA).

Distr.—Formosa.

Genus PLATYNYCHUS MOTSCHULSKY

Key to the Species

1. Tibia compressed, nearly falciform.....*systenus*
1′. Tibia slender, not falciform.....(2)
2. Black, with yellowish brown pubescence; depressed and rather parallel sided; legs brownish; 8 mm.....*adjutor*
2′. Bright castaneous brown or dusky brownish yellow or sometimes dark brown, with golden grey hairs; elongate, rather spindle shaped; legs yellow.....(3)

3 Robust; 7½–12 mm.....*formosanus*

3′. Narrow and smaller size; 6–7½ mm.....var. *anpingensis*

79. Platynychus systenus CANDÈZE

Mon., III, p. 210, t. 3, f. 29, (*Cardiophorus*) (Formosa).

Hab.—Kôshun (MIWA, ibid., 1927; Trans. Nat. Hist. Soc. Formosa, XX, No. 106, p. 8, 1930).

Distr.—Hindustan and Formosa.

80. Platynychus formosanus MATSUMURA

Mém. Soc. Ent. Belg., XVIII, p. 145, (*Cardiophorus*) (1911) (Formosa).

=*systenus* (non CAND.) MIWA, Trans. Nat. Hist. Soc. Formosa, XIX, No. 103, p. 345, (1929) (Loo-Choo).

Hab.—Taihoku, Tainan and Akô (MATSUMURA, ibid., 1911); Ensuikô, Taihoku, Arisan, Kôshun, Shinchiku, Horisha, Taitô, Tabo and Kôtôsho (MIWA, Trans. Nat. Hist. Soc. Formosa, XX, No. 106, p. 8, 1930); Shinkwa 24-V, 1929 (Y. MIWA); Kagi 4-VI, 1931 (Y. MIWA); Shijiukei 26-VIII, 1932 (?).

var. **anpingensis** MIWA, Wien. Ent. Zeit., XLVII, (2) p. 91, (1930) (Formosa).

Hab.—Anping (MIWA, ibid., 1930); Taihoku 19-VI, 1928 (R. TAKAHASHI); Tainan 28-VIII, 1928 (Y. MIWA); Shinkwa V, 1929 (Y. MIWA).

Cardiophorus nothus CAND. was reported from Formosa (Taihorin and Kankau), by E. FLEUTIAUX, and which is preserved in the Entomological Museum in Berlin-Dahlem, is thought to be synonymous with this species.

81. Platynychus adjutor CANDÈZE

vide fauna of Japan, p. 97.

Hab.—Mush, Kizan, Tainan and Shinkwa (MIWA, Trans. Nat. Hist. Soc. Formosa, XX, No. 106, p. 8, 1930).

Distr.—Japan, Corea, Loo-Choo and Formosa.

Genus CARDIOTARSUS ESCHSCHOLTZ

Key to the Species

1. Elytra without any spot; pronotum distinctly furrowed at the base.....(2)

1′. Elytra with yellowish tint on the humeral part; pronotum without basal furrow; 7½ mm.....*humeralis*

2. Pronotum fuscous, rather opaque, evenly and very closely punctured; legs brownish; 11½ mm.....*rarus*

2′. Pronotum black, shining, with fine but uneven punctation; legs pale yellowish; 7½ mm.....*pallidipes*

82. Cardiotarsus rarus MIWA

Ins. Mats., II, No. 2, p. 108, f. 4, (1927) (Formosa).

Fuscous brown, a little shining, with short fulvous pubescedce. Head flattened, minutely punctured; frontal carina well marked and semicircular. Prothorax somewhat darker and mat, convex, slightly arched at sides, with a feeble median longitudial channel which is rather obsolescent in anterior part; punctation very dense and fine on the whole surface of the pronotum, but somewhat closer on the lateral part than on the disk; hind angles short, rather obtuse behind and scarcely turned outwards; scutellum excavated in the middle. Elytra punctate-striate, the interstices convex, feebly but rugosely punctured, with the sutural interstices somewhat pale in colour. Antennae light brown, rather elongate and slender, the basal joint darker. Legs brown, tibiae dusky.

Length: 11½ mm. Width: 3 mm.

Hab.—Musha (MIWA, ibid., 1927); Musha and Nôkô (MIWA, Trans. Nat. Hist. Soc. Formosa, XX, No. 106, p. 5, 1930); Arisan VI, 1914 (M. MAKI); Shinchiku 1-VII, 1918 (J. SONAN); Piyawaikei 14-VII, 1932 (T. MITONO).

Distr.—Formosa.

83. Cardiotarsus pallidipes MIWA

Trans. Nat. Hist. Soc. Formosa, XX, No. 106, p. 5, (1930) (Formosa).

Black, shining, with fulvous pubescence. Head convex, densely punctate; frontal carina well marked, arched anteriorly and distinctly angulated before the eyes. Pronotum convex, finely and rather feebly punctulated, with the sides well arched; hind angles short but acute; basal furrow short but distinctly visible; scutellum slightly foveolate at the anterior part. Elytra rather fuscous, with fine punctured striae, the interstices rather raised at the base, very feebly and unevenly punctured. Antennae brownish, slender and about twice longer than the prothorax, the second joint shortest, the third slightly longer than the preceding joint, then gradually longer and slenderer to the terminal joint. Legs yellow.

Length: 7–7½ mm. Width: 2⅔–2½ mm.

Hab.—Shinchiku district (MIWA, ibid., 1930).

Distr.—Formosa.

84. Cardiotarsus humeralis MIWA

Trans. Nat. Hist. Soc. Formosa, XX, No. 106, p. 6, (1930) (Formosa).

Fuscous, shining, with fulvous pubescence. Head with a pair of feeble foveae, densely but rather coarsely punctured; frontal carina well marked and depressed in the middle. Prothorax convex, very closely and evenly punctured, with the sides somewhat arched; basal furrow mostly obsoles-

cent; hind angles relatively short, blunt and prolonged backwards; scutellum rather broad, deeply foveolate anteriorly. Elytra somewhat paler, with yellowish tint on the humeral part, occupying the fourth to seventh interstices, being regularly striate with punctures, the interstices finely and rather feebly punctulate. Antennae slender, about twice as long as the prothorax. Legs pale yellow.

Length: 7½ mm. Width: 2 mm.

Hab.—Shinshiku district (MIWA, ibid., 1930).

Distr.—Formosa.

Subfamily MELANOTINAE JAKOBSON

Genus PSELLIS CANDÈZE

85. Psellis formosanus SZOMBÀTHY

Ann. Mus. Nat. Hung., VIII, p. 446, f. (1910) (Formosa).

Distr.—Formosa.

The locality of this species is not mentioned in the description. The type specimen is also unknown to the author.

Genus NEODIPLOCONUS HYSLOP

Key to the Species

1. Body unicolourous.....(2)
1′. Pronotum and elytra differ in colour or spotted.....(4)
2. Pronotal posterior angles rather short, prolonged backwards.....*ciprinus*
2′. Pronotal posterior angles relatively long, acuminate and turned outwards.....(3)
3. Robust, dark ferrugineous brown; 15 mm.....*angulatus*
3′. Smaller size, bright castaneous brown; 10-12½ mm.....*castaneus*
4. Pronotum with a black longitudinal spot in the middle.....(5)
4′. Pronotum without spot.....(7)
5. Elytra bright reddish, with the apical part black.....*elegans*
5′. Elytra unicolourous.....(6)
6. Elytra black.....var. *takanoi*
6′. Elytra red.....var. *obayashii*
7. Body dark reddish except the head and elytra black; abdomen sometimes darker.....*melanopterus*
7′. Body bright reddish except the antennae, head and elytra black; abdomen and legs sometimes dark brown or black.....*sanguinicollis*

86. Neodiploconus ciprinus CANDÈZE

Elat. nouv., I, p. 47, (*Diploconus*) (1864) (Luzon).—MIWA, Ins. Mat., II, No. 2, p. 110, (1927) (Formosa).

Hab.—Kôtôsho (MIWA, ibid., 1927; Trans. Nat. Hist. Soc. Formosa, XX, No. 107, p. 58, 1930).

Distr.—Philippines and Formosa.

87. Neodiploconus angulatus CANDÈZE (Pl. IX, f. 5)

Mon., III, p. 297, (*Diploconus*) (1860) (Hongkong).—FLEUTIAUX, Ann. Soc. Ent. Fr., LXXXVII, p. 231, (*Diploconus*) (1918) (Tonkin, Malacca and Singapore).—MIWA, Ins. Mats., II, No. 2, p. 109, (1927) (Formosa).

Hab.—Kôshun (MIWA, ibid., 1927); Musha, Shinchiku, Kusukusu and Kôshun (MIWA, Trans. Nat. Hist. Soc. Formosa, XX, No. 107, p. 58, (1930); Niitaka 12-V, 1928 (S. AOKI); Kwarenkô district VII-VIII, 1919 (J. SONAN); Baibara 15-VII, 1927 (K. KIKUCHI); Arisan 19-V, 1927 (T. AKASHI); Kuraru 15-V, 1933 (Y. MIWA); Kankau 24-V, 1929 (J. SONAN).

Distr.—Hongkong, Tonkin, Malacca, Singapore and Formosa.

var. **castaneus** MIWA, Wien. Ent. Zeit., XLVII, (2) p. 92, (1930) (Formosa).

Hab.—Kôsempo, Alikang, Kagi and Kanshirei (MIWA, ibid., 1930); Kôsempo, Alikang, Horisha, Kagi, Kanshirei and Rokki (MIWA, Cat. Col. Formosa, p. 137, 1931).

Distr.—Formosa.

88. Neodiploconus elegans SZOMBÀTHY

Ann. Mus. Nat. Hung., VIII, p. 358, (*Diploconus*) (1910) (Formosa).—MIWA, Trans. Nat. Hist. Soc. Formosa, XX, No. 107, p. 59, f. (1930) (Formosa).

Hab.—Kôsempo and Fuhosho (SZOMBÀTHY, ibid., 1910); Kôsempo (MIWA, Wien. Ent. Zeit., XLVII, (2) p. 92, 1930).

Distr.—Formosa.

The colouration of elytra is very variable and two varieties have been found from Formosa as follows:

var. **takanoi** MIWA, Trans. Nat. Hist. Soc. Formosa, XX, No. 107, p. 59, (1930) (Formosa).

Hab.—Horisha (MIWA, ibid., 1930).

var. **obayashii** var. nov. (Pl. IX, f. 12)

Elytra wholly bright reddish.

Hab.—Urai in Taihoku district III, 1933 (K. ÔBAYASHI).

89. Neodiploconus melanopterus CANDÈZE

Elat. nouv., I, p. 46, (*Diploconus*) (1864) (Sumatra).—FLEUTIAUX, Ann. Soc. Ent. Fr., p. 144, (*Diploconus*) (1889) (Annam); ibid., LXXXVII, pp. 233 & 234, (*Diploconus*) (1918) (Indo-China and Borneo).—MIWA, Ins. Mats., II, No. 2, p. 110, (1927) (Formosa).

Hab.—Kôshun (MIWA, ibid., 1927).
Distr.—Sumatra, Borneo, Indo-China and Formosa.

90. Neodiploconus sanguinicollis MIWA

Trans. Nat. Hist. Soc. Formosa, XX, No. 107, p. (1930) (Formosa).

Black except the prothorax bright reddish, shining, with fine tawny pubescence. Head slightly impressed triangularly in anterior part, coarsely and unevenly punctured. Prothorax convex, widest at the base, gradually narrowing anteriorly, with the sides somewhat sinuous, very evenly and rather finely punctured on the pronotum; the punctation rather denser on the lateral part than on the disk; hind angles acute and turned outwards, with double carinae on each of them. Elytra punctate-striate, the interstices not much raised, sparsely punctured and not rugose. Antennae black, sometimes dark reddish, the second and third joints short, the third slightly longer than the second, from the fourth joint to the tenth together forming a distinct serration. Legs rather fuscous black, the tibiae and tarsi dark reddish brown, the claws reddish. Abdomen sometimes reddish.

Length: 11½ mm. Width: 3¼ mm.

Hab.—Musha, Arisan, Horisha and Kwarenkô (MIWA, ibid., 1930).
Distr.—Formosa.

Genus SPHENISCOSOMUS SCHWARZ

Key to the Species

1. Body black, with cinereous pubescence.....*restrictus*
1′. Body castaneous brown or fuscous.....(2)
2. Body fuscous, rather slender and depressed.....*frequens*
2′. Body castaneous, rather robust and convex.....(3)
3. Each pronotal posterior angle with a long carina which extends anteriorly along the margin nearly to the middle.....(4)
3′. Each pronotal posterior angle with a short carina.....*horishanus*
4. Pronotal basal furrow straight and conspicuous.....*pilosulus*
4′. Pronotal basal furrow oblique and scarcely visible.....*melanotoides*

91. Spheniscosomus restrictus CANDÈZE.

vide fauna of Japan, p. 98.

Hab.—Baibara (MIWA, Trans. Nat. Hist. Soc. Formosa, XX, No. 107, p. 60, 1930).
Distr.—Japan, Corea, China and Formosa.

92. Spheniscosomus horishanus MIWA

Ins. Mats., II, No. 2, p. 111, f. 9, (1927) (Formosa).

Bright castaneous brown, shining, with long tawny pubescence. Head impressed triangularly between the eyes but with a slight elevation isolated quite in centre, more or less foveolate on the vertex, very strongly and closely punctured, the frontal carina well marked and somewhat semicircular. Prothorax convex, rather parallel sided, gradually narrowing and rounded anteriorly, the punctation on the lateral part of pronotum like that of the head, rather feebler and sparser on the disk, with a feeble median canaliculation which is rather obliterated anteriorly; hind angles rather obtuse behind, scarcely turned outwards, with an acute carina, the basal furrow acutely impressed, being rather short and oblique; scuttellum excavated with uneven punctation. Antennae somewhat darker, the second and third joints smaller than others, the second shorter and globose, the third slightly longer. Legs reddish brown, the femora somewhat paler, the claws reddish.

Length: 16 mm. Width: 4 mm.

Hab.—Baibara (MIWA, ibid., 1927).
Distr.—Formosa.

93. Spheniscosomus pilosulus MIWA

Bright casteneous brown, shining, thickly clothed with fine tawny pubescence Head excavated in the middle, the frontal carina projected and angulated at the front of eyes, strongly and closely punctured. Prothorax convex, being the widest at the base, gradually narrowing anteriorly, very densely punctured on the lateral part of pronotum, but rather feebly and sparsely on the disk; hind angles prolonged backwards, rather obtuse benind, with two carinae in which the longer one is extending forward along the margin about to the middle of the side; basal furrow straight and distinct; scutellum nearly oblong, feebly punctured. Elytra striate with large and strong punctation, the interstices flat, the second to fifth rather broader, feebly punctured. Antennae reddish brown, the third joint longer than the second and nearly half as long as the second and fourth combined. Legs ferruginous, claws reddish.

Length: 21 mm. Width: 5½ mm.

Hab.—Namakaban in Niitaka district (MIWA, ibid., 1927).
Distr.—Formosa.

94. Spheniscosomus melanotoides MIWA

Trans. Nat. Hist. Soc. Formosa, XX, No. 107, p. 61, (1930) (Formosa).

Depressed, chestnut brown, shining, with tawny pubescence. Head convex,

very densely and rather reticulately punctured, with a pair of foveae at the anterior part; frontal carina slightly arched anteriorly. Prothorax more or less convex but not much raised, widest at the base, gradually narrowing anteriorly, punctured on the pronotal lateral part like that of the head, rather finely and sparsely on the disk; hind angles blunt at the apex, with an acute carina. Elytra finely punctate-striate, the interstices flattened, with rather coarse and uneven punctulation. Antennae slightly longer than the head and prothorax combined, the third joint nearly half as long as the second and fourth put together.

Length: 17 mm. Width: 4 mm.

Hab.—Arisan, Musha and Horisha (MIWA, ibid., 1930); Suisharyô and Kôsempo (MIWA, Wien. Ent. Zeit., XLVII, (2) p. 92, 1930).

Distr.—Formosa.

95. Spheniscosomus frequens MIWA

Trans. Nat. Hist. Soc. Formosa, XX, No. 107, p. 61, (1930) (Formosa).

=*Melanotus fuscus* (non FABRICIUS) MIWA, Ins. Mats., II, No. 2, p. 111, (*Spheniscosomus*) (1927) (Formosa).

Elongate and depressed, fuscous, with metallic lustre, long fine pubescent. Head slightly impressed triangularly in the middle, coarsely, unevenly and rather remotely punctured; frontal carina well marked but slightly emarginate at centre. Prothorax widest at the base and nearly trapezoidal, very densely and rather evenly punctured on the pronotum, but the punctures much denser on the lateral part than on the disk; hind angles acute and prolonged backwards; scutellum oblong, with somewhat obscure punctation. Elytra finely punctate-striate, the interstices, not raised especially on the basal half, finely and rather sparsely punctulate. Antennae reddish, the third joint longer than the second, the fourth slightly longer than the second and third combined. Legs reddish.

Length: 14–19 mm. Width: $3\frac{1}{2}$–$4\frac{3}{4}$ mm.

Hab.—Tappan, Kôshun, Niitaka and Baibara (MIWA, Ins. Mats., II, No. 2, p. 111, 1927); Horisha, Arisan, Musha, Niitaka, Kyuhabon, Sankakuho and Nôkô (MIWA, ibid., 1930).

Distr.—Formosa.

Genus MELANOTUS ESCHSCHOLTZ

Key to the Species

1. The third joint of antennae nearly as long as the second.....*ventralis*
1′. The third joint of antennae longer than the second.....(2)
2. The third joint of antennae nearly as long as the fourth or slightly longer.....(3)

2′. The third joint of antennae shorter than the fourth.....(4)
3. With greyish pubescence; the third joint of antennae longer than the fourth.....*ebeninus*
3′. With golden yellow pubescence; the third joint of antennae nearly as long as the fourth.....*fuscus*
4. Black except the legs and abdomen reddish.....*rufiventris*
4′. Unicolorous.....(5)
5. Rather depressed, castaneous or dark brown, with griseous pubescence.....*tamsuyensis*
5′. Convex, dark ferruginous or fuscous, with golden yellow pubescence.....(6)
6. Slender; scutellum elongate and concave; 18 mm.....*umber*
6′. Robust; scutellum nearly quadrate and not excavated; 24 mm.....*regalis*

96. Melanotus ventralis CANDÈZE

Mon., III, p. 324, (1860) (China).—MIWA, Ins. Mat., II, No. 2. p. 111, (1927) (Formosa).

Hab.—Horisha and Rikiriki (MIWA, ibid., 1927).

Distr.—China and Formosa.

97. Melanotus ebeninus CANDÈZE

Mon., III, p. 335, (1860) (Philippines).—MIWA, Trans. Nat. Hist. Soc. Formosa, XX, No. 107, p. 63, (1930) (Formosa).

Hab.—Kôtôsho (MIWA, ibid., 1930).

Distr.—Philippines and Formosa.

98. Melanotus umber BATES

Proc. Zool. Soc. Lond., p. 349, (1866) (Formosa).—MIWA, Trans. Nat. Hist. Soc. Formosa, XIX, No. 103, p. 348, (1929) (Loo-Choo).

=*regalis* (non CAND.) MIWA, ibid., XXI, No. 116, p. 260, (1931) (Loo-Choo).

Hab.—Ranrun in Niitaka district (MIWA, Trans. Nat. Hist. Soc. Formosa, XX, No. 107, p. 63, 1930).

Distr.—Formosa and Loo-Choo.

99. Melanotus regalis CANDÈZE

Mon., III, pp. 304 & 325, t. 5, f. 6, (1860) (China).—FLEUTIAUX, Ann. Soc. Ent. Fr., p. 688, (1894) (Tonkin); ibid., LXXXVII, p. 237, (1918) (Annam, Cambodja and Laos).—MIWA, Trans. Nat. Hist. Soc. Formosa, XX, No. 107, p. 62, (1930) (Formosa).

=*legatus* (nec. CAND.) MIWA, Ins. Mats., II, No. 2, p. 112, (1927) (Formosa).

Hab.—Ranrun and Horisha (MIWA, ibid., 1927); Horisha, Kôshun and Kwarenkô (MIWA, ibid., 1930).

Distr.—China, Indo-China and Formosa.

100. Melanotus fuscus FABRICIUS

Syst. El., II, p. 228, (*Elater*) (1801) (Amboina).—CANDÉZE, Mon., III, pp. 301 & 335, (1860) (India); Ann. Mus. Genova, p. 683, (1883) (Birma); C. R. Soc. Ent. Belg., p. 155, (1890) (Bengal).—FLEUTIAUX, Ann. Soc. Ent. Fr., p. 144, (1889) (Cambodja); ibid., p. 272, (1893) (Ceylon); ibid.; p. 576, (1902) (Tonkin); ibid., p. 329, (1905) (S. Hindustan); ibid., LXXXVII, p. 237, (1918) (Cambodja, Tonkin, Annam and Laos).—MIWA, Trans. Nat. Hist. Soc. Formosa, XX, No. 107, p. 64, (1930) (Formosa).

Hab.—Kôshun (MIWA, ibid., 1930).

Distr.—Amboina, India, Birma, Bengal, South Hindustan, Cambodja, Tonkin, Annam, Laos and Formosa.

101. Melanotus tamsuyensis BATES

Proc. Zool. Soc. Lond., p. 349, (1866) (Formosa).—MIWA, Journ. Soc. Trop. Agr., I, No. 3, p. 280, Pt. (1929) (Formosa); Trans. Nat. Hist. Soc. Formosa, XXI, No. 116, p. 260, (1931) (Loo-Choo).

Hab.—Giran, Taiho, Hori, Shinko, Gatsubi, Seiton, Ujitsu, Keiho, Barikiho, Shinkwa, Tôkô, Heitô, Kyôshitô, Yamato, Toyoda, Kotobuki, Kada, Hoppo and Kano (MIWA, ibid., 1929); Arisan, Horisha, Mush, Kagi, Kappanzan, Taihoku, Baibara, Tompo, Funkiko, Shinchiku, Heitô, Kwarenkô, Taitô, Tainan and Kôtôsho (MIWA, Trans. Nat. Hist. Soc. Formosa, XX, No. 107, p. 64, 1930); Kôtôsho (ibid., XXII, No. 121, p. 302, 1932); Sôzan 3-VIII, 1932 (Y. MIWA); Eboshiyama 19-21-V, 1933 (M. CHÛJÔ).

Distr.—Formosa and Loo-Choo.

102. Melanotus rufiventris MIWA

Trans. Nat. Hist. Soc. Formosa, XX, No. 107, p. 64, (1930) (Formosa).

Black except the ventral segments of the abdomen, antennae and legs reddish, shining, covered with fine golden grey pubescence. Head convex, with a pair of foveae behind the frontal carina, very closely and rather reticulately punctured. Prothorax convex, being the widest at the base, gradually and gently narrowing anteriorly, with the sides slightly curved outwards; very closely and evenly punctured on the pronotum in which the punctation is much denser on the lateral part than on the disk; hind angles prolonged backwards and not turned outwards, rather obtuse behind, with a conspicuous carina; pronotal basal furrow relatively broad and distinct; with a feeble median longitudinal canaliculation on the pronotal disk, which is scarcely visible at times. Elytra punctate-striate, the interstices finely punctulate. Antennae with the second joint smallest, the third nearly half as long as the second and fourth combined.

Length: 16–21 mm. Width: 4–5½ mm.

Hab.—Horisha, Rikiriki and Choshyu (MIWA, ibid., 1930); Kagi V, 1930 (Y. MIWA).

Distr.—Formosa.

Genus CREMNOSTETHUS SCHWARZ

103. Cremnostethus telum CANDÈZE

Elat. nouv., V, p. 49, (*Melanotus*) (1893) (Dardjiling).—MIWA, Ins. Mats., II, No. 2, p. 113, (1927) (Formosa).

Hab.—Rônô (MIWA, ibid., 1927).

Distr.—Dardjiling and Formosa.

Genus METRIAULACUS SCHWARZ

Key to the Species

1. Prothorax black; elytra testaceous.....*badiipennis*
1′. Prothorax and elytra entirely fuscous.....*formosanus*

104. Metriaulacus badiipennis CANDÈZE

Mon., III, p. 334, (*Melanotus*) (1860) (India).—MIWA, Trans. Nat. Hist. Soc. Formosa, XX, No. 107, p. 65, (1930) (Formosa).

Hab.—Rônô (MIWA, ibid., 1930).

Distr.— India and Formosa.

105. Metriaulacus formosanus MIWA

Ins. Mats., II, No. 2, p. 113, f. 10, (1927) (Formosa).

Elongate, rather fuscous, with a metallic lustre, fine fulvous pubescent. Head convex but slightly impressed between the eyes; frontal carina well marked and nearly semicircular. Prothorax convex, with the sides rather straight narrowing anteriorly, gradually and slightly widening posteriorly, very evenly, finely and rather sparsely punctured on the prontal disk, but rather closely set on the lateral part; each hind angle with double carinae in which the longer carina much raised and extending forward along the lateral margin to the middle of the sides, then gradually evanescent; pronotal basal furrow oblique and very distinct. Elytra punctate-striate, the interstices rather flattened and glabrous,

with feeble and sparse punctation. Antennae reddish brown, with the serration very distinct, the second and third joints small, globose and also correspond in size. Legs concolours with the antenna, the femora somewhat paler.

Length: 11½ mm. Width: 2½ mm.

Hab.—Baibara (MIWA, ibid., 1927); Baibara and Kusukusu (MIWA, Trans. Nat. Hist. Soc. Formosa, XX, No. 107, p. 65, 1930).

Distr.—Formosa.

Subfamily ATHOINAE C. SCHAUFUSS

Genus PARATHOUS FLEUTIAUX

106. Parathous sanguineus FLEUTIAUX

Ann. Soc. Ent. Fr., LXXXVII, p. 242, (1918) (Tonkin and Cambodja).—MIWA, Trans. Nat. Hist. Soc. Formosa, XX, No. 107, p. 66, (1930) (Formosa): teste.

=*sulcicollis* MIWA, Ins. Mats., II, No. 3, p. 136, pl. V, f. 7, (*Athous*) (1928) (Formosa).

Hab.—Taikan and Rakuraku (MIWA, ibid., 1928).

Distr.—Tonkin, Cambodja and Formosa.

Genus ATHOUS ESCHSCHOLTZ

Subgenus ATHOUS s. str.

107. Athous rufithorax MIWA (Pl. IX, f. 11)

Wien. Ent. Zeit., XLVII, (2) p. 92, (1930) (Formosa).

Hab.—Taihorin and Horisha (MIWA, ibid., 1930).

Distr.—Formosa.

Subgenus ALCIMATHOUS REITTER

Key to the Species

1. Aeneous black; prothorax rather depressed, with the sides gradually narrowing anteriorly from the base.....*temperatus*
1′. Reddish brown; prothorax convex, rather rounded anteriorly and parallel sided .....*tattakensis*

108. Athous (Alcimathous) temperatus MIWA

Trans. Nat. Hist. Soc. Formosa, XX, No. 107, p. 66, (1930) (Formosa).

Black, with an aeneous lustre, clothed with fine golden yellow pubescence. Head impressed triangularly between the eyes, very densely and rather coarsely punctured; frontal carina depressed in the middle. Prothorax rather depressed,

with the sides well margined and rather straight, being the widest at the base, gradually narrowing anteriorly, very densely punctured on the lateral part of pronotum, but the punctation somewhat sparser on the disk; hind angles relatively short and blunt; scutellum with a median longitudinal ridge. Elytra punctate-striate, the interstices somewhat raised, rather feebly rugose. Antennae black, the second joint smallest, the third slightly shorter than the fourth but corresponds in the shape. Legs aeneous, with the claws reddish.

Length: 13 mm. Width: 3½ mm.

Hab.—Arisan and Musha (MIWA, ibid., 1930).

The author has reported in the original description that he collected one female specimen from Kwarenkô having reddish brown colour and 18 mm of the body length, but the pronotal posterior carina rather perceptible, by which it may be transfered to the true *Athous*.

109. Athous (Alcimathous) tattakensis MIWA

Ins. Mats., III, No. 1, p. 38, Pl. I, f. 1, (*Paradima*) (1928) (Formosa); Trans. Nat. Hist. Soc. Formosa, XXI, No. 113, p. 85, (1931): nota.

Elongate, parallel, reddish brown or rather fuscous, a little shining, with long griseous pubescence. Head impressed triangularly between the eyes, coarsely but rather densely punctured. Prothorax convex, rather longer than wide and parallel sided, very densely punctured on the pronotum, but the punctures somewhat denser on the lateral part than on the disk; hind angles very short and obtuse behind; scutellum convex, nearly triangular. Elytra somewhat darker than the prothorax, with metallic lustre, being striate with strong punctation, the interstices convex, feebly punctured. Antennae fuscous, two basal joints reddish, the second joint smallest and globose, the third nearly twice longer than the second. Legs dark reddish.

Lehgth: 14½ mm. Width: 3½ mm.

Hab.—Tattaka in Nôkô district (MIWA, ibid., 1928); Horisha 15-V, 1913 (M. MAKI); Taataka near the Mt. Niitaka 27-V, 1933 (M. CHÛJÔ).

Distr.—Formosa.

Subgenus HETERATHOUS REITTER

Key to the Species

1. Elytra with yellowish spots.....(4)
1′. Elytra without spot.....(2)
2. Pronotal posterior corner reddish.....*rufangulus*
2′. Pronotum not spotted.....(3)
3. Pronotum black.....var. *nigricollis*

3′. Pronotum reddish.....var. *ruficollis*
4. Prothorax black.....*antennatus*
4′. Prothorax reddish.....var. *ruficollis*

110. Athous (Heterathous) antennatus sp. nov.

Black, shining, with fine fulvous pubescence. Head convex, nearly vertical in front, densely but somewhat coarsely punctured, feebly rugose and slighlty impressed between the eyes; frontal carina well marked, nearly semicircular. Prothorax longer than wide, rather straight at sides, being the widest at the base, very gently and slightly narrowing anteriorly, with a dense ocellate punctation on the pronotum among the fine and feeble rugosity; hind angles long, acute and turned outwards, with an acute carina and sparse granulation; scutellum elongate and acuminate behind, being longitudinally elevated in the middle, very unevenly but deeply punctulate. Elytra punctate-striate, the interstices not much raised, scabrous and rather transversely rugose, with yellow spot at the base and one third distance from the apex of elytra respectively, the first spot commences on the third interstices and extends to the fourth and a small part of the fifth, the second spot nearly circular and occupying the fourth to seventh interstices, being acutely emarginate at the apical extremities. Antennae dark brown, elongate, slender and nearly twice as long as the prothorax, the three basal joint ferruginous, the second and third very small and globose. Legs slender, concolourous with the antennae, with the tarsi somewhat paler.

The elytral spot variable and the second spot often extending transversely like a band or fascia.

Length: 5–7½ mm. Width: 1¼–1¾ mm.

Six individuals have been collected from Kwarenkô district during the season from July, 20th to August, 4th, 1919.

var. **ruficollis** var. nov. (Pl. IX, f. 16).

The prothorax of this species sometimes bright reddish except the prosternum black and often infuscate longitudinally on the pronotal disk. Three individuals of this variety have been collected from the same district together with the typical specimen.

111. Athous (Heterathous) rufangulus MIWA

Ins. Mats., III, No. 1, p. 137, (1928) (Formosa).

Black, shining with testaceous pubescence. Head triangularly excavated between the eyes, densely but coasely punctured. Prothorax convex with the hind corner of the pronotum and the posterior part of the propleuron bright reddish, being the narrowest at the anterior rim, gradually widening posteriorly and somewhat sinuous at the sides, evenly and densely punctured on the lateral

part of the pronotum, but rather sparsely and unevenly on the disk, with a feeble median longitudinal canaliculation on the pronotal disk; hind angles obtuse behind, slightly turned outwards and feebly carinate; scutellum convex, feebly punctulate. Elytra with cyanic green lustre, punctate-striate, the interstices convex, punctured but rather feebly rugose. Abdominal segments wholly reddish yellow. Antennae dark brown, distinctly serrate from the fourth joint, the third triangular but much more shorter and smaller than the fourth. Legs fuscous, with the tarsi somewhat paler.

Length: 11½ mm. Width: 3 mm.

Hab.—Kyûhabon and Horisha (MIWA, ibid., 1928).

The colouration of the prothorax is very variable and the two following varieties have been found from Formosa.

var. **nigricollis** MIWA.

Ins. Mats., III, No. 1, p. 137, (1928) (Formosa).

Hab.—Akô and Ranrun (MIWA, ibid., 1928); Arisan, Ranrun and Tamaho (MIWA, Trans. Nat. Hist. Soc. Formosa, XX, No. 107, p. 67, 1930); Funkiko 6-V, 1927 (S. ISSIKI); Jujiro 26-IV, 1931 (T. SHIRAKI).

var. **ruficollis** MIWA.

Trans. Nat. Hist. Soc. Formosa, XX, No. 107, p. 68, (1930) (Formosa).

Hab.—Arisan (MIWA, ibid., 1930).

Subgenus CREPIDOPHORUS MULSANT et GUILLEBEAU

112. Athous (Crepidophorus) nigripennis MIWA

Ins. Mats., II, No. 3, p. 136, pl. V, f. 6, (1928) (Formosa)

Bright reddish except the head, elytra, antennae and legs black, with a metallic lustre, sparsely fine black pubescent. Head excavated triangularly in the middle, coarsely punctured. Prothorax elongate, convex, the narrowest at the anterior rim, slightly and gradually widening to the base, with a feeble median longitudinal canaliculation which is evanescent anteriorly, very finely and rather sparsely punctulate on the whole surface of the pronotum; hind angles acuminate behind, slightly turned outwards, each with a carinated ridge; scutellum oval and longitudinally projected in the middle, with a coarse punctation. Elytra punctate-striate, the interstices punctured and rather feebly rugose. Antennae compressed, distinctly serrate from the third joint, the second smallest, the third slightly shorther than the fourth but twice as long as the preceding joint. Legs slender.

Length: 11 mm. Width: 2½ mm.

Hab.—Taihoku (MIWA, ibid., 1928).

Distr.—Formosa.

Genus **TAIWANATHOUS** MIWA

113. Taiwanathous arisanus MIWA

Trans. Nat. Hist. Soc. Formosa, XX, No. 107, p. 68, (1930) (Formosa).

Bright castaneous yellow somewhat shining with fine testaceous pubescence. Head concave, densely punctulate; frontal carina emarginate in V-shape at the middle. Prothorax oblong, convex, densely and finely punctulate, with a feeble median longitudinal channel, at the sides being rather parallel, distinctly margined and somewhat sinuous; hind angles acute and pointed behind. Elytra punctate-striate, the interstices finely granulated. Antennae yellowish. Legs somewhat paler.

Length: 11 mm. Width: $2\frac{1}{2}$ mm.

Hab.—Arisan (MIWA, ibid., 1930).

Distr.—Formosa.

Subfamily **CORYMBITINAE** SCHENKLING

Genus **CORYMBITES** LATREILLE

Subgenus **ACTENICERUS** KIESENWETTER

114. Corymbites (Actenicerus) formosensis MIWA (Pl. IX, f. 21)

Ins. Mats., III, No. 1, p. 139, pl. V, f. 12, (1928) (Formosa).

Black, with a coppery or a cyanic green lustre, fine short griseous pubescent. Head concave, rather excavate between the eyes, deeply and coarsely punctured. Prothorax convex, elongate, being the narrowest at the anterior rim, gradually widening posteriorly, punctured like that of the head on the anterior part of the pronotum and very finely and sparsely on the posterior part, but rather closely and strongly on the lateral part; hind angles relatively elongate, rather obtuse behind and turned outwards, with an acute carina; scutellum rather convex, nearly circular. Elytra punctate-striate, with some spots congested with white pubescence, which are sometimes confluent or fasciate, the interstices somewhat convex, coasely and densely punctured. Antennae black. Legs dark brown, with the claws reddish.

Length: 16 mm. Width: $3\frac{3}{4}$ mm.

Hab.—Tattaka near Musha (MIWA ibid., 1928); Hori 26-VII, 1926 (Y. MIWA); Habon 1-V, 1929 (K. SATÔ); Sôzan IV, 1928 (Y. MIWA); Mt. Daiton 30-IV, 1932 (S. MINOWA); Hinokiyama 26-III, 1933 (K. ÔBAYASHI).

Distr.—Formosa.

var. **mushanus** MIWA.

Ins. Mats., III, No. 1, p. 139, pl. V, f. 13, (1928) (Formosa).

Body slender, without any spot on the elytra.

Hab.— Musha (MIWA, ibid., 1928).

Subgenus **METACTENICERUS** MIWA

Key to the Species

1. Body metallic green; legs bright orange yellow.....(2)
1′. Body aeneous black; legs fuscous.....*fuscipes*
2. Elytra with a purplish glitter.....*speciosus*
2′. Elytra with a greenish glitter.....var. *viridus*

115. Corymbites (Metactenicerus) speciosus MIWA

Ins. Mats., III, No. 1, p. 144, pl. V, f. 24, (1928) (Formosa).

Bright green, with a golden lustre, sparsely short greyish pubescent. Head slightly impressed triangularly between the antennae, strongly but unevenly punctured. Prothorax nearly oblong, with a median longitudinal canaliculation, densely but evenly punctured on the lateral part of the pronotum, but rather sparsely on the disk; hind angles well carinate and slightly turned outwards; scutellum short, concave and declined anteriorly. Elytra bright purple, with a metallic lustre, punctate-striate, the interstices convex, feebly and rugosely punctured. Antennae black. Legs orange yellow.

Length: 9 mm. Width: $2\frac{1}{4}$ mm.

Hab.—Musha (MIWA, ibid., 1928).

Distr.—Formosa.

var. **viridus** var. nov. (Pl. IX, f. 6).

Elytra wholly bright greenish coloured.

Hab.—Habon in Taichiu district 1-V, 1929 (K. SATÔ).

116. Corymbites (Metactenicerus) fuscipes MIWA (Pl. IX, f. 18)

Trans. Nat. Hist. Soc. Formosa, XXI, No. 113, p. 72, (*gratus* var.) (1931) (Formosa).

Aeneous black, with fine cinereous pubescence rather sparsely. Head not much convex, with very close and rather vermiculate punctures. Prothorax longer than wide, with the sides rather parallel, well margined and somewhat sinuous, very closely and rather reticulately punctured on the pronotum, but not so acutely set as that of *C. gratus* LEW.; a broad longitudinal channel running in the middle of the pronotum; hind angles long, acute and turned outwards; scutellum convex, nearly tongue-shaped, very finely and closely punctulate

among fine granulation. Elytra with punctured striae, the interstices rather flattened, feebly punctured and transversely rugose. Antennae dark reddish brown. Legs fuscous.

Length: 14 mm. Width: 3 mm.

Hab.—Arisan and Musha 18-V (MIWA, ibid., 1931).

Resembles *C. gratus* LEW. in general outline, so the author has treated this as a variety of the latter, but in the present investigation it has been separated from *C. gratus* by the following charateristics.

1. Body much depressed and rather parallel.
2. Body aeneous black, somewhat shining and not obscure aeneous.
3. Pronotal furrow much broad.
4. Legs fuscous or dark brown and not bright orange yellow.

Subfamily SENODONINAE SCHENKLING

Genus PENIA HOPE

117. Penia eschscholtzi HOPE

in GRAY, Zool. Miscell., p. 26, (1831).—CANDÈZE, Mon., IV, p. 230, t. 3, f. 7, (1863) (Nepal).—MIWA, Ins. Mats., III, No. 1, p. 38, (1928) (Formosa).

Hab.—Rônô (MIWA, ibid., 1928).

Distr.—Nepal and Formosa?

Genus CSIKIA SZOMBÀTHY

Key to the Species

1. Brownish yellow, with fine fulvous pubescence.....*dimatoides*
1′. Chestnut brown, with long greyish pubesence.....*taiwana*

118. Csikia dimatoides SZOMBÀTHY

Ann. Mus. Nat. Hung., VIII, p. 359, (1910) (Formosa).

Hab.—Kôsempo and Taihorin (SZOMBÀTHY, ibid., 1911); Kôshun, Horisha and Shinchiku (MIWA, Trans. Nat. Hist. Soc. Formosa, XXI, No. 113, p. 73, 1931).

Distr.—Formosa.

119. Csikia taiwana MIWA (Pl. IX, f. 23)

Wien. Ent. Zeit., XLVII, (2), p. 93, (1930) (Formosa).

Hab.—Taihorinsho, Arisan, Kwarenkô and Baibara (MIWA, ibid., 1930).

Distr.—Formosa.

Subfamily LUDIINAE FLEUTIAUX

Genus LUDIUS BERTHOLD

Key to the Species

1. Elongate, fuscous, with tawny pubescence; legs reddish.....*sieboldi*
1′. Relatively broad and entirely black.....*niponensis*

120. Ludius sieboldi CANDÈZE

vide fauna of Japan, p. 127.

Hab.—Baibara and Musha (MIWA, Ins. Mats., III, No. 1, p. 40, 1928); Sokutsu and Kôsempo (FLEUTIAUX, Wien. Ent. Zeit., XLVII, (2) p. 97, 1930).

Distr.—Japan, Loo-Choo and Formosa.

121. Ludius niponensis LEWIS

vide fauna of Japan, p. 127.

Hab.—Sokutsu (FLEUTIAUX, Wien. Ent. Zeit., XLVII, (2), p. 97, 1930).

Distr.—Japan, Corea and Formosa.

Genus NEOTRICHOPHORUS JAKOBSON

Key to the Species

1. Chestnut brown, with longitudinal carinain the middle of the head...*carinicephalus*
1′. Fuscous, without carina on the head.....*plebejus*

122. Neotrichophorus plebejus CANDÈZE

vide fauna of Japan, p 129.

Hab.—Taihoku (MIWA, Ins. Mats., III, No. 1, p. 43, 1928); Anping and Kôsempo (FLEUTIAUX, Wien. Ent. Zeit., XLVII, (2) p. 97, 1930); Musha, Horisha, Baibara, Suisha, Rengechi and Kôtôsho (MIWA, Trans. Nat. Hist. Soc. Formosa, XXI, No. 113, p. 75, 1931).

Distr.—Japan, Loo-Choo, Corea ane Formosa.

123. Neotrichophorus carinicephalus MIWA

Wien. Ent. Zeit., XLXII, (4) p. 205, (1931).

Hab.—Anping (MIWA, ibid.).

Distr.—Formesa.

Genus APHANOBIUS ESCHSCHOLTZ

Key to the Species

1. Elytra punctate-striate, with the apical extremities emarginate.....*longithorax*

1′. Elytra with rather obliterated striation and the apical extremities truncate.....
.....*alaomorphus*

124. Aphanobius longithorax WIEDEMANN

Zool. Mag., II, k, p. 106, (*Elater*) (1823) (Bengal).—CANDÈZE, Mon., IV, p. 319, (1863): nota.; Ann. Soc. Ent. Belg., XXXIV, p. 155, (1890) (India).—FLEUTIAUX, Ann. Soc. Ent. Fr., LXXXVII, p. 258, (1918): nota.; Opusc. Inst. Indochine, II, p. 149, (1924) (Indo-China).—MIWA, Ins. Mats., III, No. 1, p. 43, (1928) (Formosa).

=*cylindricus* CANDÈZE, Mon., IV, pp. 319 & 320, (1863) (Cambodja); Ann. Mus. Civ. Stor. Nat. Gen., p. 138, (1878) (Borneo); ibid., p. 686, (1888) (Birma); Ann. Soc. Ent. Belg., XXXIV, p. 155, (1890) (Bengal State).—FLEUTIAUX, Ann. Soc. Ent. Fr., p. 145, (1889) (Cochin-China); ibid., p. 258, (1918): nota.

=*longus* CANDÈZE, Mon., IV, pp. 319 & 320, (1863) (Philippines).—FLEUTIAUX, Ann. Soc. Ent. Fr., LXXXVII, p. 258, (1918) (Borneo, Java and Philippines): nota; Opusc. Inst. Indochine, II, p. 149, (1924) (Indo-China).

Hab.—Kôtôsho (MIWA, ibid., 1928).

Distr.—Bengal, Birma, Borneo, Java, Indo-China, Philippines and Formosa.

125. Aphanobius alaomorphus CANDÈZE

Mon., IV, pp. 318 & 319, t. 4, f. 11, (1863) (China and Indo-China); Cat. Elat., p. 191, (1891) (Indo-China).—SCHWARZ, in WYTSMAN, Gen. Ins., 46, Elat., p. 261, (1907) (Darjeeling).—FLEUTIAUX, Ann. Soc. Ent. Fr., LXXXVII, p. 257, (1918) (Cambodja).—MIWA, Ins. Mats., III, No. 1, p. 43, (1928) (Formosa).

Hab.—Rônô (MIWA, ibid., 1928).

Distr.—Darjeeling, Cambodja, China and Formosa.

Genus PARALLELOSTETHUS SCHWARZ

126. Parallelostethus acutus CANDÈZE

Mon., IV, p. 299, t. 4, f. 8, (*Ludius*) (1863) (Java and Assam).—SCHWARZ, in WYTSMAN, Gen. Ins., 46c, Elat. p. 258, (1907) (Java, Darjeeling, Assam and Sikkim).—MIWA, Ins. Mats., III, No. 1, p. 43, (1928) (Formosa).

Hab.—Kôshun (MIWA, ibid., 1928).

Distr.—Java, Darjeeling, Assam, Sikkim and Formosa.

Genus LUDIGENUS CANDÈZE

127. Ludigenus politus CANDÈZE

Mon., IV, p. 326, (1863) (Borneo, Siam and Philippines); Ann. Mus. Genova,

p. 687, (1888) (Birma).—FLEUTIAUX, ibid., p. 571, (1899) (Nias and Sumatra); Ann. Soc. Ent. Fr., p. 688, (1894) (Tonkin); ibid., p. 258, (1918) (Indo-China, Andaman and Celebes).—MIWA, Ins. Mats., III, No. 1, p. 43, (1928) (Formosa).

Hab.—Kôshun (MIWA, ibid., 1928).

Distr.—Borneo, Sumatra, Nias, Birma, Siam, Andaman, Indo-China, Celebes, Philippines and Formosa.

Genus SCELISUS CANDÈZE

128. Scelisus sanguineus CANDÈZE

Mon., IV, p. 328, t. 5, f. 1, (1863) (North Hindustan).—MIWA, Ins. Mats., III, No. 1, p. 43, (1928) (Formosa).

Hab.—Rônô (MIWA, ibid., 1928).

Distr.—North Hindustan and Formosa.

Genus AGRIOTIDES SCHWARZ

129. Agriotides tonkinensis FLEUTIAUX (Pl. IX, f. 8)

Ann. Soc. Ent. Fr., LXVII, p. 690, (*Silesis*) (1894) (Tonkin).—SCHWARZ, Deutsche Ent. Zeitschr., p. 341, (1902) (*Agonischius*) (1902) (Tonkin); in WYTSMAN, Gen. Ins., 46c, Elat. p. 253, No. 293, (1907).—FLEUTIAUX, Ann. Soc. Ent. Fr. LXXXVII, p. 265, (1918) (Tonkin and Annan).—MIWA, Trans. Nat. Hist. Soc. Formosa, XXI, No. 113, p. 77, (1931) (Formosa).

var. **calonus** FLEUTIAUX, Ann. Soc. Ent. Fr., p. 688, (1894) (Tonkin); ibid., p. 265, (1918) (Tonkin and Annam).

=*tonkinensis* var. SCHWARZ, Deutsche Ent. Zeitschr., p. 341, (1902) (Tonkin).

var. **pallidiangulus** MIWA, Ins. Mats., III, No. 1, p. 46, pl. I, f. 13, (*Agriotes*) (1928) (Formosa); Trans. Nat. Hist. Soc. Formosa, XXI, No. 113, p. 77, (1931): teste.

var. **formosanus** MIWA, Ins. Mats., III, No. 1, p. 46, pl. I, f. 14, (1928) (Formosa).

A key to the varieties of this species is as follows:

1. Upper surface of the body entirely black.....*tonkinensis*
1′. Upper surface of the body not entirely black.....(2)
2. Pronotal posterior angles brownish yellow.....(3)
2′. Pronotum entirely black; elytra reddish brown.....var. *formosanus*
3. Elytra black.....var. *pallidiangulus*
3′. Elytra brownish yellow.....var. *calonus*

Hab.—Horisha, Shinchiku, Taihoku and Niitaka (MIWA, ibid., 1928); Kôsempo, Kankau and Sokutsu (FLEUTIAUX, Wien. Ent. Zeit., XLVII, (2) p. 97, (1930).

Distr.—Tonkin, Annam and Formosa.

Genus AGRIOTES ESCHSCHOLTZ

Key to the Species

1. Fuscous, a little shining, not tomentous.....(2)
1′. Not fuscous, opaque, tomentous.....(3)
2. Pronotum with the sides rather parallel or feebly widening posteriorly and a carina on each hind angle scarcely perceptible; 11½ mm.....*fuscus*
2′. Pronotum at the base much more wider than the anterior rim, with an acute carina on each hind angle; punctation much denser; 8 mm.....*taiyarui*
3. Body black; legs reddish.....*angustatus*
3′. Legs black.....(4)
4. Pronotum bright reddish.....*nokozanus*
4′. Pronotum not reddish.....(5)
5. Pronotum and elytra testaceous, with a longitudinal black stripe on the pronotal disk.....*sonanis*
5′. Pronotum black.....(6)
6. Elytra dark brown.....var. *brunneipennis*
6′. Body wholly black.....var. *nigrinus*

130. Agriotes fuscus MIWA

Wien. Ent. Zeit., XLVII, (2) p. 93, (1930) (Formosa).

Hab.—Kôsempo (MIWA, ibid., 1930).

Distr.—Formosa.

131. Agriotes taiyarui sp. nov.

Reddish brown or fuscous, a little shining, with fine griseous pubescence. Head convex, vertical, very closely but rather coarsely punctured. Prothorax convex, narrowest at the anterior margin, gradually and gently widening posteriorly to the base, with the lateral margin rather sinuous, very closely and rather reticulately punctured on the pronotum; hind angles acute, distinctly carinate and somewhat turned outwards; scutellum rather plane, nearly elliptical, minutely but unevenly punctulate. Elytra punctate-striate, the interstices not much raised, feebly scabrous and rather transversely rugose. Antennae slender, castaneous or reddish yellow, the second and third joints shorter than others, the third slightly longer than the preceding joint. Legs concolorous with the antennae.

Length: 8 mm. Width: 2 mm.

Hab.—Kayahara 23-VIII, 1929 (Y. MIWA): Holotype; Nishimura 24-VII, 1929 (Y. MIWA); Kobayashi 25-VII, 1929 (Y. MIWA).

Seven individuals have been collected from the above mentioned localities in Taihoku district.

132. Agriotes sonanis MIWA

Ins. Mats., III, No. 1, p. 45, pl. I, f. 10, (1928) (Formosa).

Black except the pronotum and elytra testaceous, rather opaque, covered with fine golden grey pubescence. Head very closely but rather carsely punctured; frontal carina oblique at the lateral sides and well marked. Prothorax castaneous yellow on the pronotum except the basal part narrowly black, with a longitudinal black stripe in the middle of pronotal disk, which extends from the base to the anterior rim, being rounded anteriorly, rather parallel sided at the middle part, widening a little before the hind angles, very densely and rather evenly punctured on the whole pronotal surface; hind angles elongate, rather acute, each with a long carina; scutellum concave, nearly triangular. Elytra testaceous, narrowly fuscous on the sutural part of the apex, with punctured striae, the interstices flattened, finely and evenly punctured. Antennae dark brown, the second joint short and nearly as long as the third, feebly serrate from the fourth joint. Legs concolorous with the antenna. Very variable in colour and two varieties have been described from Formosa.

Length: 13 mm. Width: 3 mm.

Hab.—Musha (MIWA, ibid., 1928).

Distr.—Formosa.

var. **brunneipennis** MIWA, Trans. Nat. Hist. Soc. Formosa, XXI, No. 113, p. 78, (1931) (Formosa).

Hab.—Sankakuho (MIWA, ibid., 1931); Arisan 19-V, 1927 (T. AKASHI); Tâtaka 27-V, 1933 (M. CHÛJÔ).

var. **nigrinus** MIWA, Trans. Nat. Hist. Soc. Formosa, XXI, No. 113, p. 78, (1931). (Formosa).

Hab.—Horisha (MIWA, ibid., 1931); Taiheizan 23-V, 1931 (S. MINOWA).

133. Agriotes nokozanus MIWA

Ins. Mats., III, No. 1, p. 45, pl. I, f. 11, (1928) (Formosa).

Elongate, black, opaque, with cinereous pubescence. Head coarsely but very closely punctured. Prothorax bright reddish except the prosternum black, very closely and rather reticulately punctured on the pronotal surface, but the punctures minute and very even, being much longer than wide, with the sides rather parallel and widening before the hind angles, a feeble median longitudinal channel running on the pronotal disk which is rather obliterated anteriorly; hind angles elongate and acuminate behind, with a carina on each of them;

scutellum pointed flehind. Elytra punctate-striate, the interstices finely punctured and rugose. Antennae dark brown, the second and third joints reddish, nearly globose, loosely serrate from the fourth joint. Legs slender, concolourous with the antenna, with the tarsi somewhat paler.

Length: 10 mm. Width: 2⅓ mm.

Hab.—Mt. Nôkô (MIWA, ibid., 1928).

Distr.—Formosa.

134. Agriotes angustatus MIWA

Ins. Mats., III, No. 1, p. 46, (1928) (Formosa).

Elongate. black, rather opaque, covered with fine golden grey pubescence. Head very closely but rather coarsely punctured; frontal carina oblique laterally and well elevated. Prothorax longer than wide, rounded anteriorly, slightly widening before the hind angles, with the sides rather parallel at the middle; the punctation like that of the head on the pronotal surface; hind angles turned outwards and well carinate; scutellum concave, acuminate behind. Elytra punctate-striate, the striae fine and the punctation very strong, the interstices finely granulated and rather transversely rugose. Antennae and legs bright reddish yellow, but the former somewhat darker.

Length: 10 mm. Width: 2½ mm.

Hab.—Kuyania (MIWA, ibid., 1928); Musha district 18-V, 15-VI, 1919 (T. ÔKUNI); Arisan 24-IV, 1928 (J. SONAN); 24-V, 1933 (M. CHÛJÔ).

Distr.—Formosa.

Genus AGONISCHIUS CANDÈZE

Key to the Species

1. Body bright green, with a golden lustre; legs orange yellow.....*mushanus*
1′. Body not greenish.....(2)
2. Pale brownish yellow; pronotum with a single carina on each hind angle and double kinds of punctations; 6 mm.....*gracilis*
2′. Body variable in colour and size; pronotum with double carinae on each hind angle and single punctation, which is very sparse and fine or sometimes very close and rather reticulate.....*obscuripes*

135. Agonischius obscuripes GYLLENHAL

vide fauna of Japan, p. 130.

Hab.—Kôsempo, Alikang, Kankau, Tainan and Taihorin (MIWA, Wien. Ent. Zeit., XLVII, (2) p. 94, 1930); Kôsempo (FLEUT., Wien. Ent. Zeit., XLVII, (2), p. 97, 1930); Taihoku, Urai, Horisha, Musha, Baibara, Baikei, Kuraru, Tainan, Shinkwa, Rokkiri, Tattaka, Chipon, Kwarenkô, Taitô, Kôsempo, Alikang,

Kankau, Taihorin, Kagi, Taiheizan, Thichiu and Shôkwa (MIWA, Trans Nat. Hist. Soc. Formosa XXI, No. 113, p. 80, 1931).

Distr.—Japan (Kiushiu), Corea, China, Loo-Choo, Formosa, Indo-China, Hindustan, Himalaya and Caucasus.

The colouration and the size of the body are very variable in this species and seven varieties have been reported by the author, and moreover *A. vittiger* HEYDEN, *A. formosanus* MIWA, *A. okinawensis* MIWA or *A. fuscomarginatus* LEWIS may also be thought as varieties of the same species. A key to these members found in Formosa is as follows:

1. Body bright castaneous yellow, opaque; pronotum and elytra margined with black stripe.....(2)
1′. Elytra unicolorous.....(4)
2. Pronotum with longitudinal stripe in the middle.....(3)
2′. Pronotum without median stripe.....var. *formosanus*
3. Elytral suture not striped.....var. *vittiger*
3′ Elytra with the suture fuscous.....var. *fuscomarginatus*
4. Prothorax and elytra correspond in colour.....(5)
4′. Prothorax and elytra differ in colour.....(7)
5. Body brownish yellow, shining.....var. *brunneus*
5′. Body black.....(6)
6. With an aeneous lustre.....*obscuripes*
6′. With a blue or a cyaneous lustre.....var. *caschmilensis*
7. Prothorax reddish.....(8)
7′. Prothorax not reddish.....(9)
8. Head reddish.....var. *ruficephalus*
8′. Head blackish.....var. *sanguinicollis*
9. Prothorax fuscous, opaque; elytra aenescent, shining.....var. *taikozanus*
9′. Pronotum black; elytra brownish yellow.....(10)
10. Pronotum margined with brownish yellow at the lateral side.....var. *marginicollis*
10′. Pronotum entirely black.....var. *candezellus*

var. **caschmilensis** KOLLER et REDTENBACHER, in Hügel, Reise Kaschm., p. 507, (*Ludius*) (1844) (Kaschmil).—FLEUAIAUX, Ann. Soc. Ent. Fr., LXXXVII, p. 262, (1918) (Tonkin).—MIWA, Ins. Mats., III, No. 1, p. 48, (1928) (Formosa).
=*obscuripes* var. a CANDÈZE, Mon., IV, p. 420, (1863).

Hab.—Baibara (MIWA, ibid., 1928).

var. **ruficephalus** MIWA, Ins. Mats., III, No. 1, p. 48, (1928) (Formosa and Loo-Choo).

Hab.—Kôshun (MIWA, ibid., 1928); Kankau and Kôsempo (MIWA, Wien. Ent. Zeit., XLVII, (2) p. 94, 1930); Chipon 13-V, 1933 (Y. MIWA); Kuraru 15-V, 1933 (Y. MIWA).

var. **sanguinicollis** MIWA, Ins. Mats., III, No. 1, p. 48, (1928) (Loo-Choo and Formosa).

Hab.—Urai, Horisha, Kôshun and Kuraru (MIWA, ibid., 1928); Kôsempo, Chikutôki, Kankau, Taihorin and Alikang (MIWA, Wien. Ent. Zeit., XLVII, (2) p. 94, 1930); Sôsan 5-VI, 1932 (Y. MIWA).

var. **candezellus** MIWA, Ins. Mats., III, No. 1, p. 48, (1928) (Formosa).

=*obscuripes* var. b CANDÈZE, IV, p. 421, (1863) (India, Indo-China and China).

Hab.—Horisha and Tainan (MIWA, ibid., 1928); Kankau and Kôsempo (MIWA, Wien. Ent. Zeit., XLVII, (2) p. 94, 1930); Hokutô 18-IV, 1929 (K. SATÔ); Sôsan 5-VI, 1932 (Y. MIWA).

var. **brunneus** MIWA, Ins. Mats., III, No. 1, p. 48, (1928) (Formosa).

Hab.—Horisha and Baibara (MIWA, ibid., 1928); Kôsempo and Sokutsu (MIWA, Wien. Ent. Zeit., XLVII, (2) p. 94, 1930); Kôshun 26-IV, 25-V, 1918 (J. SONAN).

var. **marginicollis** MIWA, Ins. Mats., III, No. 1, p. 48, (1928) (Formosa).

Hab.—Baibara (MIWA, ibid., 1928); Kankau (MIWA, Wien. Ent. Zeit., XLVII, (2) p. 94, 1930).

var. **taikozanus** MIWA, Ins. Mats., III, No. 1, p. 49, (1928) (Formosa).

Hab.—Mt. Taikô (MIWA, ibid., 1928); Sokutsu and Kôsempo (MIWA, Wien. Ent. Zeit., XLVII, (2) p. 94, 1930).

var. **formosanus** MIWA, Ins. Mats., II, No. 1, p. 19, pl. I, f. 13, ♂, (*Megapenthes*) (1927) (Formosa).

Hab.—Niitaka, Ranrun and Tamaho (MIWA, ibid., 1927); Kankau (MIWA, Wien. Ent. Zeit., XLVII, (4) p. 205, 1931).

var. **vittiger** HEYDEN, Horae Soc. Ent. Ross., XXI, p. 267, (1887) (Corea).—MIWA, Trans. Nat. Hist. Soc. Formosa, XIX, No. 103, p. 350, (1929) (Corea, Loo-Choo and Formosa).

=*vitticollis* MIWA (pars), Ins. Mats., II, No. 1, p. 18, pl. I, f. 12 (*Megapenthes*) (1927) (Loo-Choo and Corea).

Hab.—Sokutsu and Alikang (MIWA, Wien. Ent. Zeit., XLVII, (2) p. 94, 1930); Shinchiku, Kwarenkô district and Taitô (MIWA, Journ. Trop. Agr., I, No. 3, p. 280, 1929).

var. **fuscomarginatus** LEWIS, Ann. Mag. Nat. Hist., XVII, (6) p. 337, (*Aphanobius*) (1896) (Ôshima).

=*vitticollis* MIWA (pars), Ins. Mats., II, No. 1, p. 18, pl. I, f. 12, (*Megapenthes*) (1927) (Loo-Choo and Corea).

Hab.—Taiheizan 30-VII, 1930 (S. MINOWA).

136. Agonischius mushanus MIWA

Ins. Mats., II, No. 1, p. 47, pl. I, f. 15, (1928) (Formosa).

Bright metallic green, golden shining, covered with fine griseous pubescence. Head feebly impressed longitudinally in the middle, coarsely, unevenly but very closely punctured. Prothorax convex, widest at the base, gradually and gently narrowing anteriorly, with a feeble longitudinal channel in the middle, punctured like that of the pronotum, but rather finely and a little sparsely on the disk; hind angles acute and turned outwards, with a carina on each of them; scutellum convex, pointed behind, with a longitudinal carina in the middle. Elytra with distinctly punctured striae, the interstices coarsely and very faintly punctured. Antennae fuscous, the three basal joints brownish yellow, the second joint short nearly as long as the third. Legs bright reddish yellow.

Length: 5½ mm. Width: 1½ mm.

Hab.—Musha (MIWA, ibid., 1928); Horisha V-VIII, 1918 (H. KAWAMURA); Taichiu VI, 1911 (I. NITOBE); Taiheizan 23-V, 1931 (S. MINOWA).

Distr.—Formosa.

137. Agonischius gracilis MIWA

Wien. Ent. Zeit., XLVII, (4) p. 205, (1931) (Formosa).

Hab.—Kankau and Horisha (MIWA, ibid., 1931).

Distr.—Formosa.

Subfamily **SYNAPTINAE** FLEUTIAUX

Genus **GLYPHONYX** CANDÈZE

Key to the Species

1. Elytral interstices punctulate.....(4)
1′. Elytral interstices granular.....(2)
2. Body nearly thrice as long as width.....*kankaui*
2′. Body over four times as long as it is wide.....(3)
3. Reddish brown, a little shining; antennae and legs bright reddish yellow.....*longulus*
3′. Castaneous, shining, antennae and legs pale yellow.....*castaneus*
4. Elytra variegated.....*sauteri*
4′. Elytra unicolorous.....(5)
5. Prothorax and elytra differ in colour.....(6)
5′. Prothorax and elytra correspond in colour.....*arisanus*
6. Prothorax bright reddish; elytra black.....*rubricollis*
6′. Prothorax fuscous; elytra brownish yellow.....*brunneipennis*

138. Glyphonyx kankaui MIWA

Wien. Ent. Zeit., XLVII, (4) p. 206, (1931) (Formosa).

Hab.—Kankau and Kôshun (MIWA, ibid., 1931).

Distr.—Formosa.

139. Glyphonyx longulus MIWA

Wien. Ent. Zeit., XLVII, (2) p. 94, (1930) (Formosa).

Hab.—Kôsempo, Horisha and Rônô (MIWA, ibid., 1930).

Distr.—Formosa.

140. Glyphonyx castaneus MIWA

Wien. Ent. Zeit., XLVII, (4) p. 207, (1931) (Formosa).

Hab.—Taihorin, Taihorinsho, Horisha and Gyochi (MIWA, ibid., 1931).

Distr.—Formosa.

141. Glyphonyx sauteri MIWA

Wien. Ent. Zeit., XLVII, (4) p. 207, (1931) (Formosa).

Hab.—Taihorin and Taihorinsho (MIWA, ibid., 1931).

Distr.—Formosa.

142. Glyphonyx arisanus MIWA

Wien. Ent. Zeit., XLVII, (4) p. 206, (1931) (Formosa).

Hab.—Taihorin, Arisan and Kanshirei (MIWA, ibid., 1931).

Distr.—Formosa.

143. Glyphonyx brunneipennis MIWA

Wien. Ent. Zeit., XLVII, (4) p. 206, (1931) (Formosa).

Hab.—Kankau (MIWA, ibid., 1931).

Distr.—Formosa.

144. Glyphonyx rubricollis MIWA

Ins. Mats., III, No. 1, p. 49, pl. I, f. 16, (1928) (Formosa); Wien. Ent. Zeit., LXVII, (4) p. 208 (1931); in table.

Hab.—Arisan, Horisha, Kagi, Kôshun, Ranrun, Tompo, Baibara and Takesaki (MIWA, ibid., 1928); Taihorinsho, Sokutsu, Kôsempo, Taihorin and Kankau (FLEUT., Wien. Ent. Zeit., XLVII, (2) p. 96, 1930).

Distr.—Formosa.

Genus SILESIS CANDÈZE

Key to the Species

1′. Each pronotal posterior angle with a long carina which extends forwards to the anterior rim.....*sauteri*

1′. Each pronotal posterior angle without such carina.....(2)

2. Pronotum usually darker than elytra; shorter than 7 mm.....*mutabilis*

2′. Body unicolorous; longer than 9 mm.....*absimilis*

145. Silesis sauteri MIWA (Pl. IX, f. 7)

Wien. Ent. Zeit., XLVII, (2) p. 95, (1930) (Formosa); Trans. Nat. Hist. Soc. Formosa, XXIII, No. 124, p. 9, (1933) (Loo-Choo).

Hab.—Fuhosho, Kôsempo, Taihorin, Taihorinsho, Musha and Horisha (MIWA, ibid., 1930); Tamaru 30-VIII, 1923 (T. SHIRAKI); Tabo 24-VIII, 1923 (T. SHIRAKI); Arisan 10-X, 1912 (T. NITOBE); Mizuho 7-V, 1933 (Y. MIWA); Taiheizan VII, 1930 (S. MINOWA); Rimogan 12-V, 1933 (M. CHÛJÔ); Eboshiyama 17～21-V, 1933, (M. CHÛJÔ).

Distr.—Formosa and Loo-Choo (Iriomote).

146. Silesis absimilis CANDÈZE

Mon., IV, p. 463, (1863) (Hongkong).—MIWA, Wien. Ent. Zeit., XLVII, (2) p. 95 (1930): in table; Trans. Nat. Hist. Soc. Formosa, XXI, No. 113, p. 82, (1931) (Formosa).

Hab.—Taihoku (MIWA, ibid., 1931).

Distr.—Hongkong and Formosa.

Six individuals collected from Taihoku are preserved in the author's collection, but the body larger, robuster and somewhat constricted at the sides of prothorax as compared with the typical specimen.

147. Silesis mutabilis BATES

Proc. Zool. Soc. Lond., p. 349, (1866) (Formosa).—MIWA, Journ. Trop. Arg., I, No. 3, p. 280, (1929): teste.

=*formosanus* MATSUMURA, Mém. Soc. Ent. Belg., XVIII, p. 143, (*Agriotes*) (1911) (Formosa).

=*taichuensis* MATSUMURA, ibid.

Hab.—Taichû (MATSUMURA, ibid., 1911); Taichû, Shôkwa, Hori, Sinkwa, Kôshun and Kwarenkô (MIWA, ibid., 1929).

Distr.—Formosa.

Subfamily **DENTICOLLINAE** SCHENKLING

Genus **DENTICOLLIS** PILLERET et MITTERPACHER

Key to the Species

1. Scutellum with a conspicuously arched carina which is projected longitudinally on the plane; head and prothorax fuscous; elytra reddish, with fine reddish velvet pubescence.....*puerilis*

1′. Scutellum longitudinally elevated in the middle and nearly like a prism; prothorax fuscous, with the margin testaseous; elytra dull red, sometimes infuscate on the sutural part and lateral margins.....*mounaldaui*

148. Denticollis puerilis MIWA (Pl. IX, f. 14)

Trans. Nat. Hist. Soc. Formosa, XXI, No. 113, p. 83, (1931) (Formosa).

Black, rather shining, with fine fulvous pubescence. Head black, triangularly excavate in the middle, rather strongly and very closely punctured. Prothorax dark brown, with the margins and four nodules of the pronotum reddish brown, very closely but unevenly punctured on the pronotum; the punctures more or less vermiculate and sometimes confluent; scutellum black, longitudinally carinate; the carina very conspicuous and well arched. Elytra bright red, punctate-striats, with the punctures very deep, the intertices convex and rugose. Antennae and legs black.

Length: 10½–13 mm. Width: 3–4 mm.

Hab.—Arisan (MIWA, ibid., 1931); Funkiko in Arisan 29-IV, 1931 (T. SHIRAKI).
Distr.—Formosa.

149. Denticoills mounaldaui MIWA (Pl. IX, f. 15)

Trans. Nat. Hist. Soc. Formosa, XXI, No. 113, p. 84, (1931) (Formosa).

Black, rather shiny, with short fine fulvous pubescence. Head brownish at the anterior margin, deeply excavate between the eyes, with dense but uneven punctation. Prothorax black, with the margin reddish brown in general, but varying from black to reddish brown, with two pairs of nodules on the pronotal disk, which are quadrately situated and a deep canaliculation extending longitudinally between the nodules, very closely, strongly but rather unevenly punctured on the whole surface; scutellum nearly triangular, longitudinally elevated in the middle and makes like two sides of a prism. Elytra generally red, sometimes fuscous, with the margin and suture infuscate, strongly punctate-striate, the interstices feebly rugose. Antennae fuscous, the second joint smallest and globose, the third to tenth together forming an acute serration. Legs fuscous, with the tarsi paler.

Length: 7–9 mm. Width: 1¾–2½ mm.

Hab.—Musha (MIWA, ibid., 1931); Jujiro in Arisan 26-IV, 1931 (T. SHIRAKI).
Distr.—Formosa.

Genus **HEMIOPS** LAPORTE DE CASTELNAU

150. Hemiops flava LAPORTE DE CASTELNAU

in SILBERMANN, Rév. ent., 15, (1836) (China, Java, Malay and Indo-China).—CANDÈZE, Mon., IV, p. 495, t. 6, f. 7, (1936) (China, Indo-China and Malay archipel.); C. R. Soc. Ent. Belg., p. 156, (1890) (Bengal).—BATES, Proc. Zool. Soc. Lond., p. 350, (1866) (Formosa).—FLEUTIAUX, Ann. Soc. Ent. Belg., p. 330, (1905) (S. Hindustan); Ann. Soc. Ent. Fr. LXXXVII, p. 275, (1918) (Sikkim, Assam, Laos, Borneo, Formosa and Phillippines).

=*crassa* (nec. GYLLENHAL) CANDÈZE, Ann. Mus. Genova, p. 689, (1888) & p. 790, (1891) (Birma); Ann. Soc. Ent. Belg., p. 495, (1892) (Bengal); Ann. Mus. Genova, p. 502, (1894) (Sumatra).

Hab.—Paroe, Kankau, Taihorin, Botanwan and Fuhosho (FLEUT., Wien. Ent. Zeit., XLVII, (2) p. 96, 1930); Musha, Horisha, Tompo, Naifumpo and Tainan (MIWA, Trans. Nat. Hist. Soc. Formosa, XXI, No. 113, p. 84, 1931); Riyohen to Ratô 5-IX, 1929 (R. TAKAHASHI); Dômon 29-VII, 1929 (Y. MIWA); Reimei 14-VII, 1932 (T. MITONO); Kuraru 21, 26-VIII, 1932 (Y. MIWA).
Distr.—Bengal, South Hindustan, Sikkim, Assam, Birma, Malay, Sumatra, Java, Borneo, Indo-China, China and Formosa.

Genus **PLECTROSTERNUS** LACORDAIRE

151. Plectrosternus rufus LACORDAIRE (LATREILLE nom. nud.)

Gen. Col., IV, p. 228, (1857) (India).—CANDÈZE, Mon., IV, p. 493, t. 6, f. 6, (1863) (Sylhet, Assam and Cochin-China); Bull. Soc. Ent. Belg., p. 156, (1890) (Chota-Nagpore du Bengal.)—HEYNE & TASCHENBERG, Exot. Käf., p. 166, t. 25, f. 66, (1908) (India and Cochin-China).—MIWA, Ins. Mats., III, No. 1, p. 50, (1928) (Formosa).

Hab.—Kuraru (MIWA, ibid., 1928).
Distr.—Bengal, Sylhet, Assam, Cochin-China and Formosa.

V. Fauna of Loo-Choo

As regards the *Elateridae* of Loo-Choo, only two species had been reported from Amami-Ôshima, viz. *Lacon binodulus* MOTSCH. by H. von SCHÖNFELDT in 1890 and a new species *Aphanobius fuscomarginatus* LEWIS in 1896, before the author published "the Elaterid-fauna of Loo-Choo" in 1929 and a supplement to this paper in 1931. In 1933, the author reported 106 Coleoptera from Iriomote Island in southern Loo-Choo, in which seven species of *Elateridae* are included. Afterwards, he revised some previous works on the fauna and added 13 new species in his present investigation, so that the number of species totals 52 as enumarated below.

The species revised or new to the fauna are as follows:

Lacon depressus (nec. CAND.) MIWA, 1931=*L. musculus* CANDÈZE
Lacon microcephalus MOTSCHULSKY (new to Ôshima)
Anchastus castelnaui CANDÈZE (new to Ôshima)
Melanotus restrictus (nec. CAND.) MIWA, 1931=*M. umber* BATES
Ludius sieboldi CANDÈZE (new to Ôshima)
Aphanobius fuscomarginatus LEWIS=*Agonischius obscuripes* GYLLENHAL, var.
Agonischius vittiger HEYDEN=*A. obscuripes* GYLL., var.
Silesis musculus CANDÈZE (new to Ôshima)

(New Species)

Adelocera yayeyamana sp. nov. (Ishigaki)
Melanoxanthus sonani sp. nov. (Okinawa)
Anchastus castaneus sp. nov. (Ôshima)
Quasimus cordatus sp. nov. (Iriomote)
Quasimus takahashii sp. nov. (Ishigaki)
Paracardiophorus loochooensis sp. nov. (Iriomote)
Neotrichophorus aureopilosus sp. nov. (Iriomote)
Agriotes insularis sp. nov. (Iriomote)
Agriotes hirayamai sp. nov. (Iriomote)
Glyphonyx esakii sp. now. (Ôshima)
Glyphonyx iriomotensis sp. nov. (Iriomote)
Glyphonyx pallidipes sp. nov. (Iriomote)

The Distribution List of the Species Indigenous to Loo-Choo

Species \ Localities	1. Corea	2. Japan	Loo-Choo: 3. Amami-Ôshima	4. Okinawa	5. Miyako	6. Ishigaki	7. Iriomote	8. Formosa	9. China	10. Indo-China	Other Localities
1. *Adelocera yayeyamana* MIWA						×					
2. *Lacon sakaguchii* MIWA				×				×			
3. *L. setiger* BATES							×	×			
4. *L. formosanus* BATES					×		×	×			
5. *L. bipapulatus* CANDÈZE				×				×			
6. *L. fuliginosus* CANDÈZE		×	×								
7. *L. scutellaris* CANDÈZE		×	×								
8. *L. binodulus* MOTSCHULSKY	×	×	×	×							
9. *L. musculus* CANDÈZE				×				×	×		
10. *L. scrofa* CANDÈZE	×	×	×								
11. *L. microcephalus* MOTSCHULSKY		×	×					×			
12. *Paralacon taciturnus* CANDÈZE				×				×	×	×	Birma
13. *P. amamiensis* MIWA											
14. *Alaus berus* CANDÈZE		×	×	×				×		×	
15. *A. putridus* CANDÈZE		×	×			×		×	×	×	Bonin Islands, Java, Malacca.
16. *Tetrigus lewisi* CANDÈZE	×	×	×	×				×	×		
17. *Pectocera fortunei* CANDÈZE		×	×	×				×	×		
18. *Campsosternus auratus* DRURY				×				×	×	×	
19. *Campsosternus matsumurae* MIWA						×					
20. *Sephilus formosanus* SCHWARZ							×	×			
21. *Aeolocerma sinensis* CANDÈZE				×			×	×	×	×	Birma, Malacca, India, Sumatra, Celebes.
22. *Xanthelater granulipennis* MIWA				×				×			
23. *Melanoxanthus melanocephalus* FABRICIUS				×		×		×	×	×	Cosmopolitan in tropical region.
24. *M. pulcherus* MIWA							×				

Species \ Localities	1	2	3	4	5	6	7	8	9	10	Other Localities
25. *Melanoxanthus sonani* MIWA				×							
26. *Anchastus castelnaui* CANDÈZE								×		×	Siam
27. *A. castaneus* MIWA			×								
28. *Quasimus cordatus* MIWA			×				×				
29. *Q. takahashii* MIWA						×					
30. *Paracardiophorus loochooensis* MIWA							×				
31. *P. nigro-apicalis* MIWA						×					
32. *Neodiploconus ferrugineipennis* MIWA						×	×				
33. *Melanotus annosus* CANDÈZE	×	×	×								
34. *M. senilis* CANDÈZE		×	×								
35. *M. umber* BATES						×		×			
36. *M. loochooensis* MIWA				×							
37. *M. tamsuyensis* BATES			×	×		×		×			
38. *Pristilophus sakaguchii* MIWA				×							
39. *P. magnus* MIWA				×							
40. *Ludius sieboldi* CANDÈZE		×	×					×			
41. *Neotrichophorus aureopilosus* MIWA							×				
42. *N. plebejus* CANDÈZE	×	×		×	×			×			
43. *Agriotes insularis* MIWA							×				
44. *A. hirayamai* MIWA							×				
45. *Agonischius obscuripes* GYLLENHAL	×	×	×	×	×	×	×	×	×	×	Caucasus, India.
46. *Glyphonyx illepidus* CANDÈZE		×		×							
47. *G. esakii* MIWA			×								
48. *G. iriomotensis* MIWA							×				
49. *G. pallidipes* MIWA							×				
50. *Silesis okinawensis* MIWA				×		×					
51. *S. sauteri* MIWA							×	×			
52. *S. musculus* CANDÈZE	×	×	×								
	7	16	18	21	3	11	15	23	10	8	

When we see the species distributing in Loo-Choo, we can perceive that the fauna has close affinity to Formosa. But it is a fact that some peculiar modification about the species have occured as compared with the latter, though both of them are included in the Indo-China subregion and mutually showing the affinity of species especially in southern parts of them. The fact is proved by the many endemic species indigeneous to the Loo-Choo archipelago. Ôshima is a particular fauna in southern Japan having many tropical species to the contrary of the fauna of Yakushima laying between Kagoshima and Ôshima and corresponds to the fauna of Kiushiu when we consider the *Elateridae* only. The fauna of Ôshima may be actually separated from Yakushima, so that the author added this island to northern Loo-Choo from the zoogeographical point of view. The species distributing in Japan, and which have been found in Ôshima are 67 in number of the affinity of percentage, but some of them are widely distributed through the archipelago of our Empire. The most of the species belong to Oriental fauna, viz. *Lacon microcephalus* MOTSCH., *Pectocera fortunei* CAND., *Tetrigus lewisi* CAND., *Agonischius obscuripes* GYLL., *Neotrichophorus plebejus* CAND. and *Ludius sieboldi* CAND., which seems to be descended to Japan through Ôshima or to Ôshima through Kiushiu or Corea. On the other hand, the species of Formosa found in Ôshima are 44 in number of the affinity of percentage, while the endemic species to this island is three in number.

ELATERIDAE OF LOO-CHOO

Subfamily AGRYPNINAE FLEUTIAUX

Genus ADELOCERA LATREILLE

1. Adelocera yayeyamana sp. nov.

Reddish brown, a little shining, covered with short golden grey hairs. Head impressed triangularly between the eyes, rather vertical in front, very closely but coarsely and rather rugosely punctured; punctures rather vermiculate or confluent. Prothorax rather darker in colour, convex, with the sides arched and the widest at the middle, gradually narrowing anteriorly as well as slightly posteriorly; lateral margin well marked, slightly expanded and curved downwards; punctation on the pronotum very dense and even on the disk, but much more closer and somewhat coarser on the lateral part; hind angles relatively short and turned outwards, each with a carina rather perceptible; on the pronotum is a feeble median longitudinal canaliculation which is rather obsolescent anteriorly; scutellum nearly oblong, flattened and coarsely punctured. Elytra visibly punctate-striate, but not conspicuous by a rugosity on the dorsal surface, the interstices not much raised, deeply punctured and transversely rugose very markedly. Antennae and legs much paler.

Length: $13\frac{1}{4}$ mm. Width: $3\frac{3}{4}$ mm.

Hab.—Ishigaki Is. 27-V, 1933 (S. HIRAYAMA).

Genus LACON LAPORTE DE CASTELNAU

Key to the Species

1. Pronotum with an antescutellar elevation; elytra with diffused punctation and lacking striation.....*microcephalus*
1′. Pronotum without such elevation; elytra more or less punctate.....(2)
2. Pro- and meta-pleura with oblique grooves to keep the trasi of the anterior and median legs in situ.....(3)
2′. Pro- and meta-pleura without such groove.....(4)
3. Elytra with long elected hairs besides being densely covered with scales; pronotal lateral margin not crenulate.....*setiger*
3′. Elytra without elected hair; pronotal lateral margin crenulate.....*sakaguchii*
4. Elytra covered with variegated scales.....(6)
4′. Elytra with uniform coloured scales; pronotum without turbercle or nodule...(5)
5. Prothorax and elytra narrowing at the base; pronotal posterior angles a little extend.....*scrofa*

5′. Prothorax and elytra parallel sided at the base; pronotal posterior angle short and not extend.....*musculus*
6. Prothorax generally wider than long, with a pair of transverse nodules on the pronotum.....*binodulus*
6′. Prothorax rather longer than wide.....(7)
7. Prothorax with a pair of small tubercles on the pronotum.....(9)
7′. Prothorax with a pair of obtuse transverse nodules on the pronotum, which are sometimes obliterated.....(8)
8. Scutellum white pubescent.....*scutellaris*
8′. Scutellum not white.....*fuliginosus*
9. Pronotal posterior angles short and truncate, with the lateral margin somewhat sinuous but not arcuate.....*bipapulatus*
9′. Pronotal posterior angles longer, with the lateral margin well arched...*formosanus*

2. Lacon sakaguchii MIWA (Pl. VIII, f. 3)

vide fauna of Formosa, p. 184.

Hab.—Okinawa: Naha VIII, (S. SAKAGUCHI).

Distr.—Formosa and Loo-Choo.

3. Lacon setiger BATES

vide fauna of Formosa, p. 182.

Hab.—Iriomote: Sonai 25-V, 1932 (S. HIRAYAMA).

Distr.—Formosa and Loo-Choo.

4. Lacon formosanus BATES

vide fauna of Formosa, p. 181.

Hab.—Iriomote V, 1932 (S. HIRAYAMA). Miyako 17-VI, 1932 (J. SONAN).

Distr.—Formosa and Loo-Choo.

5. Lacon bipapūlatus CANDÈZE

vide fauna of Formosa, p. 181.

Hab.—Okinawa: Naha VIII, (S. SAKAGUCHI); Nishibaru 15-V, 1918 (M. ISHIDA).

Distr.— China, Formosa and Loo-Choo.

6. Lacon fuliginosus CANDÈZE

vide fauna of Japan, p. 68.

Hab.—Amami-Ôshima: Naze 26-VIII, 1932 (T. SHIRAKI, S. MINOWA, T. MAKI aud K. KOBAYASHI).

Distr.—Japan and Loo-Choo.

7. Lacon scutellaris CANDÈZE

vide fauna of Japan, p. 68.

Hab.—Amami-Ôshima (after CANDÈZE and LEWIS).

Distr.—Loo-Choo and Japan?

8. Lacon binodulus MOTSCHULSKY

vide fauna of Japan, p. 67.

Hab.—Amami-Ôshima: Naze 22-IV, 1930 (R. TAKAHASHI) Kumeshima: Nakasato 21-VIII, 1931 (H. YASHIRO).

Distr.—Japan, Corea and Loo-Choo.

9. Lacon musculus CANDÈZE (Pl. VIII, f. 1)

vide fauna of Formosa, p. 182.

Hab.—Okinawa: Kumeshima 20~23-VI, 1931 (H. YASHIRO).

Distr.—China, Formosa and Loo-Choo.

10. Lacon scrofa CANDÈZE (Pl. VIII, f. 2)

vide fauna of Japan, p. 69.

Hab.—Amami-Ôshima: Naze 26-VII, 1932 (T. SHIRAKI, S. MINOWA, T. MAKI and K. KOBAYASHI).

Distr.—Japan, Corea and Loo-Choo.

11. Lacon microcephalus MOTSCHULSKY

vide fauna of Japan, p. 70.

Hab.—Amami-Ôshima: Gusuku to Nishinakama via Santarô-tôge 15-VII, 1933 (T. ESAKI and K. YASUMATSU)

One specimen is in the collection of the Entomological Laboratory, Kiushiu Imperial University.

Distr.—Japan, Loo-Choo and Formosa.

Genus **PARALACON** REITTER

Key to the Species

1. Pro- and metapleuron with oblique grooves to keep the tarsi in situ.....*taciturnus*
1′. Pro- and metapleuron without such groove.....*amamiensis*

12. Paralacon taciturnus CANDÈZE (Pl. VIII, f. 4)

vide fauna of Formosa, p. 186.

Hab.—Okinawa: Nishibaru 17-IV, 1917 (M. ISHIDA).

Distr.—Birma, Indo-China, Hainan, Formosa and Loo-Choo.

13. Paralacon amamiensis sp. nov.

Dusky fuscous, a little shining, thickly covered with greyish scales. Head excavate triangularly between the eyes, very deeply and rather sparsely punctured in the middle but the punctures somewhat coarser and much denser just in front of eyes; front depressed and nearly vertical. Prothorax rather depressed, longer than it is wide, with the sides rather tenuous and the margin somewhat sinuous, on the pronotum are deep ocellate punctures unevenly set among feeble minute punctulation, but the punctures much denser and coarser on the lateral part than on the disk; hind angles short and turned outwards, each with a feeble carina which is scarcely perceptible; scutellum flattened, rather elongate, constricted at the anterior side and obtusely pointed behind, with a minute punctulation. Elytra visibly punctate-striate, but the striation not very deep, the interstices rather flattened, rather sparsely and much unevenly punctured, with a feeble rugosity. Antennae and legs dark reddish.

Length: 18 mm. Width: $4\frac{3}{4}$ mm.

Hab.—Amami-Ôshima: Yakkachi in Sumiyomura 17-VII, 1933 (T. ESAKI and K. YASUMATSU).

Two specimens have been collected from the above mentioned locality on the same date.

Holotype is in the collection of Entomological Laboratory, Kiushiu Imperial University.

Subfamily **HEMIRRHIPINAE** FLEUTIAUX

Genus **ALAUS** ESCHSCHOLTZ

Key to the Species

1. Elytra emerginated like a crescent at the extremities.....*putridus*
1′. Elytra not emarginated nor truncated at the extremities.....*berus*

14. Alaus berus CANDÈZE

vide fauna of Japan, p. 71.

Hab.—Amami-Ôshima, Naze 26-VII, 1932 (T. SHIRAKI, S. MINOWA, T. MAKI and K. KOBAYASHI). Okinawa: Shuri VII, 1904 (?); Naha VII, 1923 (S. SAKAGUCHI); Nago 13-IV, 1925 (H. YASHIRO).

Distr.—Japan, Loo-Choo, Formosa and Laos.

15. Alaus putridus CANDÈZE

vide fauna of Japan, p. 71.

Hab.—Amami-Ôshima: Yakkachi in Sumiyomura 17-VII, 1933 (T. ESAKI and K. YASUMATSU). Ishigaki VII, 1932 (S. HIRAYAMA); 21-VII, 1932 (T. SHIRAKI, S. MINOWA, T. MAKI and K. KOBAYASHI).

Distr.—Japan, Loo-Choo, Formosa, Bonin-islands, China, Tonkin, Annam, Java and Malacca.

Genus **TETRIGUS** CANDÈZE

16. Tetrigus lewisi CANDÈZE

vide fauna of Japan, p. 72.

Hab.—Riukiu (after OKAMOTO, 1924).

Distr.—Japan, Loo-Choo?, Corea, Formosa and China.

Subfamily **OXNOPTERINAE** SCHENKLING

Genus **PECTOCERA** HOPE

17. Pectocera fortunei CANDÈZE

vide fauna of Japan, p. 72.

Hab.—Amami-Ôshima: Naze 22-IV, 1930 (R. TAKAHASHI). Okinawa: Naha VII (S. SAKAGUCHI).

Distr.—Japan, Loo-Choo, Formosa and China.

Subfamily **CHALCOLEPIDIINAE** SCHENKLING

Genus **CAMPSOSTERNUS** LATREILLE

Key to the Species

1. Pronotum with two pairs of red spots.. ..... *matsumurae*
1′. Pronotum without spot..... *auratus*

18. Campsosternus auratus DRURY

vide fauna of Formosa, p. 190.

Hab.—Okinawa: Kokuba 12-IX, 1918 (H. YASHIRO).

Distr.—China (Continental), Hainan, Tonkin, Annam, Cambodja, Formosa and Loo-Choo.

19. Campsosternus matsumurae MIWA (pl. VIII, f. 5)

Trans. Nat. Hist. Soc. Formosa, XIX, No. 103, p. 344, (1929) (nom. nov.): teste. =*4-maculatus* (nec. FLEUTIAUX) MIWA, Ins. Mats., II, No. 1, p. 14, pl. I, f. 4, (1927) (Loo-Choo).

Glabrous, bright green, with a metallic lustre. Head impressed in the middle, very sparsely and unevenly punctured; frontal carina depressed in the middle. Prothorax convex, thickly margined, rather opaque on the lateral part

of the pronotum, with a reddish stripe on each pronotal anterior corner which is somewhat extending backward along the margin, a far smaller and much less obvious spot on each side of the median elevation on the disk just before the basal rim, the former about three times longer and more dtstinctly marked than the latter, being very sparsely and feebly punctured on the pronotal disk, but rather strongly and densely on the anterior corner; hind angles acute and rather grooved on the surface. Elytra with fine but unevenly scattered punctation and obliterated striation. Antennae reddish brown, the basal joint black and shining. Legs castaneous brown with somewhat greenish lustre, the femora yellowish brown at the inner side.

Length: 30 mm. Width: 8½ mm.

Hab.—Ishigaki: Warabuto 19-VIII, 1911 (T. IWASAKI).

Distr.—Loo-Choo.

Subfamily **DICREPIDIINAE** FLEUTIAUX

Genus **SEPHILUS** CANDÈZE

20. Sephilus formosanus SCHWARZ (Pl. VIII, f. 6)

vide fauna of Formosa, p. 191.

Hab.—Iriomote: Sonai 20-VII, 1932 (S. HIRAYAMA).

Distr.—Formosa and Loo-Choo.

Subfamily **CONODERINAE** FLEUTIAUX

Genus **AEOLODERMA** FLEUTIAUX

21. Aeoloderma sinensis CANDÈZE (Pl. VIII, f. 8)

vide fauna of Formosa, p. 193.

Hab.—Okinawa: Yogi 2-VI, 1931 (H. YASHIRO); Kosato 21-V, 1919 (M. ISHIDA). Iriomote VI, 1932 (S. HIRAYAMA).

Distr.—Chida, Indo-China, Birma, Malacca, Bengal, Hindustan, Sumatra, Celebes, Formosa and Loo-Choo.

Genus **XANTHELATER** MIWA

22. Xanthelater granulipennis MIWA (Pl. VIII, f. 7)

vide fauna of Formosa, p. 197.

Hab.—Okinawa: Kunjan VII, 1928 (H. YASHIRO).

Distr.—Formosa and Loo-Choo.

Genus MELANOXANTHUS KIESENWETTER

Key to the Species

1. Body densely black; prothorax bright reddish except the sternum.....*sonani*
1′. Prothorax not reddish.....(2)
2. Body bright castaneous yellow, with a median longitudinal black stripe on the pronotal disk; elytra with the apical part also black.....*melanocephalus*
2′. Body black, with the pronotal posterior angles and elytra pale yellow; elytra infuscate on the suture and outer margin.....*pulcherus*

23. Melanoxanthus melanocephalus FABRICIUS (Pl. VIII, f. 12)

vide fauna of Formosa, p. 203.

Hab.—Okinawa: Nishibaru 18-VI, 1928 (H. YASHIRO). Ishigaki V, 1923 (S. HIRAYAMA).

Distr.—Arabia, Madagascar, Maurice, Bourbon, Comores, Mascareignes, Sèchelles, Zangibar, India, Ceylon, Borneo, Sumatra, Siam, Indo-China, China, Formosa, Loo-Choo, Philippines, Celebes, New Zealand, Sierra-Leone and Brasil.

24. Melanoxanthus pulcherus MIWA (Pl. VIII, f. 14)

Trans. Nat. Hist. Soc. Formosa, XXIII, No. 124, p. 8, f. (1933) (Loo-Choo).

Hab.—Iriomote VI, 1932 (S. HIRAYAMA).

Distr.—Loo-Choo.

25. Melanoxanthus sonani sp. nov. (Pl. VIII, f. 13)

Deep black except the pronotum and pleuron bright reddish, very fine tawny pubescent on the pronotum, but on the elytra is dense, black and rather bristle-like pubescence. Head convex, rather evenly but not much deeply punctured, with a median longitudinal carina which is rather obliterated and scarcely perceptible, in front of each eye is a scabrous longitudinal ridge which is free from puncture; front rather vertical and the carina evanescent in the middle, being confluent with the nasal area. Prothorax convex, rather rounded, being the narrowest at the anterior rim, gradually and very gently widening to the end of the hind angles, very evenly but not deeply punctured on the pronotum, but the punctures much denser on the lateral parts than on the disk; hind angles black, acute and conspicuously carinate; scutellum elongate, convex and transversely truncate behind, with a coarse punctulation. Elytra punctate-striate, the interstices not much raised, granulated, coarsely scabrous and transversely rugose, with the apical extramities crescently emarginate. Antennae black, the second joint shortest, the third obconical and one third longer than the second, from the fourth joint to the tenth closely punctured, opaque and together forming a distinct serration. Legs black, the claws reddish.

Length: 9¼ mm. Width: 2½ mm.

Hab.—Okinawa: Naha 25-VI, 1932 (J. SONAN).

Subfamily PHYSORRHININAE FLEUTIAUX

Genus ANCHASTUS J. LECONTE

Key to the Species

1. Dark reddish brown, with the tarsal lamella relatively short and not distinct.....*castelnaui*
1′. Bright castaneous yellow, with the tarsal lamella long and conspicuous...*castaneus*

26. Anchastus castelnani CANDÈZE

vide fauna of Formosa, p. 205.

Hab.—Amami-Ôshima: Yakkachi in Sumiyomura 19-VII, 1923 (T. ESAKI and K. YASUMATSU).

Distr.—Siam, Laos, Formosa and Loo-Choo.

27. Anchastus castaneus sp. nov.

Bright castaneous yellow, shining, covered with golden yellow hairs. Head convex, closely but somewhat coarsely punctured, the punctures ocellate but rather uneven; frontal carina well marked, nearly semicircular. Prothorax convex, somewhat rounded at the sides, being the widest at the base, gradually and gently narrowing anteriorly, very unevenly and somewhat sparsely punctured on the disk of pronotum, but much densely on the lateral part; hind angles acute and produced backwards, with distinct double carinae on each of them; scutellum nearly tongue-shaped, flattened, very coarsely and much sparsely punctured. Elytra strongly punctate-striate, the interstices not much raised, being rather sparsely granulated and coarsely scabrous. Antennae elongate, slender and much longer than the head and prothorax combined, the second joint shortest, the third twice longer than the preceding joint and nearly half as long as the length of the second and fourth combined. Legs somewhat paler, the tibia with two acute spurs at the extremity, the lamella of the third tarsal joint large and conspicuous.

Length: 8¼ mm. Width: 2 mm.

Hab.—Amami-Ôshima: Gusuku to Nishinakama via Santarô-tôge 15-VII, 1933 (T. ESAKI and K. YASUMATSU).

Subfamily **HYPNOIDINAE** FLEUTIAUX

Genus **QUASIMUS** GOZIS

Key to the Species

1. Body black, with the scutellum cordate.....*cordatus*
1′. Body fuscous black, with the scutellum triangular.....*takahashii*

28. Quasimus cordatus sp. nov. (Pl. VIII, f. 24)

Black, shining, with fine cinereous pubescence. Head convex, finely and evenly but rather feebly punctured; frontal carina well marked, semicircular. Prothorax convex, widest at the base, gradually and very gently narrowed to the middle, then suddenly narrowing anteriorly, very finely and evenly punctulate on the pronotum; hind angles acute and slightly turned outwards, each with a carina conspicuously extending to the anterior rim; scutellum slightly excavate, being heart-shaped and minutely punctulate. Elytra very finely and evenly punctured on the whole surface, with the suture somewhat raised. Antennae fuscous. Legs dark reddish brown, the tarsi rather paler. Resembles somewhat *Q. minutissimus*, but the body rather parallel and elongate, having a heart-shaped scutellum.

Length: 2¼ mm. Winth: ¾ mm.

Hab.—Iriomote Is. VI, 1932 (S. HIRAYAMA).

29. Quasimus takahashii sp. nov. (Pl. VIII, f. 25)

Black, with somewhat fuscous tint, rather shining, fine greyish pubescent. Head convex, very finely and densely punctured; frontal carina well marked, nearly semicircular. Prothorax convex, rather broader than long, with the sides rather parallel at the posterior half, but gradually narrowed from the middle to the anterior rim, very finely, rather minutely and somewhat evenly punctulate on the pronotum; the punctures much denser on the lateral part than on the disk; hind angles acute and produced backwards, with an acute carina extends to the anterior rim; scutellum slightly impressed elliptically in the middle, nearly triangular and obtusely pointed behind, with coarse but minute punctulation. Elytra finely and rather evenly punctured. Antennae fuscous. Legs reddish, the tarsi somewhat paler.

Length: 1⅜ mm. Width: ⅜ mm.

Hab.—Ishigaki Is. 22-IV, 1930 (R. TAKAHASHI) (Holotype); 21-VII, 1932 (T. SHIRAKI, S. MINOWA, T. MAKI and K. KOBAYASHI).

Subfamily **ESTHESOPINAE** FLEUTIAUX

Genus **PARACARDIOPHORUS** SCHWARZ

Key to the Species

1. Body jet-black; elytra bright yellowish on the upper half; scutellum with an anterior fovea; 10 mm.....*nigro-apicalis*
1′. Body black; elytra fuscous or reddish brown, often infuscate on the sutural or posterior parts; scutellum without anterior fovea; 4 mm.....*loochooensis*

30. Paracardiophorus loochooensis sp. nov. (Pl. VIII, f. 11)

Black, shining, with short fine griseous pubescence. Head convex, unevenly and rather coarsely punctured; frontal carina well marked and narrowly expanded. Prothorax spherically convex, with the sides arched and the lateral margin obsolescent in anterior part, being very finely and evenly punctulate on the pronotum, but the punctures somewhat denser on the lateral part than on the disk; hind angles short, produced backward, with a feeble carina which is scarcely perceptible; basal furrow short and broad; scutellum declined, slightly concave and finely punctulate, without anterior fovea. Elytra dark reddish brown but often infuscate on the sutural and posterior parts, sometimes entirely fuscous and somewhat paler on the basal part, with punctured striae, the interstices not much raised, minutely and rather sparsely punctulate. Antennae fuscous, the two basal joints reddish. Legs yellow.

Length: 4 mm. Width: 1⅛ mm.

Hab.—Iriomote Is. V～VI, 1932 (S. HIAAYAMA).

31. Paracardiophorus nigro-apicalis MIWA (Pl. VIII, f. 10)

Ins. Mats., II, No. 2, p. 109, f. 6, (1927) (Loo-Choo).

Black, shining, with the testaceous pubescenee. Head convex, very densely but unevenly punctured; frontal carina distinct and rather transverse. Prothorax convex, the narrowest at the anterior border, gradually widening posteriorly to the middle, then slightly narrowing to the base, with the side arcuate and rounded at the middle, very densely punctured on the pronotum; hind angles rather obtuse behind, slightly turned outwards, each with a carina; scutellum concave, longitudinally canaliculate in the middle and foveolate in front. Elytra orange yellow on the upper half, with punctured striae, the interstices minutely punctured. Antennae fuscous, the basal joint robust, others slender. Legs concolorous with the antennae, the tarsi somewhat paler.

Length: 10 mm. Width: 3½ mm.

Hab.—Ishigaki: V, 1932 (S. HIRAYAMA); 21–VII, 1932 (T. SHIRAKI, S. MINOWA, T. MAKI and K. KOBAYASHI).
Distr.—Loo-Choo.

Subfamily **MELANOTINAE** JAKOBSON

Genus **NEODIPLOCONUS** HYSLOP

32. Neodiploconus ferrugineipennis MIWA (Pl. VIII, f. 15)

Ins. Mats., II, No. 2, p. 110, f. 7, (1927) (Loo-Choo).

Black, a little shining, with fulvous pubescence. Head convex rather rounded in front, with dense ocellate punctation; frontal carina slightly marked and semicircular. Prothorax convex, the narrowest at the anterior rim, gradually widening to the base, very closely and rather reticulately punctured on the pronotum, with a median longitudinal canaliculation which is rather obliterated anteriorly; hind angles elongate, acute, each with double carinae; scutellum convex, nearly oblong and finely punctulate. Elytra ferruginous, punctate-striate, the interstices convex, coarsely scabrous and rather transversely rugose, with the apex slightly emarginate. Antennae dusky reddish, the second and third joints shorter than others, the former smallest and the latter slightly longer. Legs concolorous with the elytra, the claws reddish.

Length: 12½ mm. Width: 4¼ mm.

Hab.—Ishigaki Is.: Warabuto 19–VIII, 1911 (T. IWASAKI); V, (1933) (S. HIRAYAMA). Iriomote Is.: Sonai V, 1932 (S. HIRAYAMA).
Distr.—Loo-Choo.

The type locality of this species was mentioned with errorneous supposition by the author, because the specimen was labeled as Okinawa only. The exact locality is Ishigaki, from which the first species was collected by T. IWASAKI and sent to S. MATSUMURA.

Genus **MELANOTUS** ESCHSCHOLTZ

Key to the Species

1. Body black.....(2)
1′. Body castaneous or fuscous.....(3)
2. Body length nearly four times longer than it is wide, shining; pronotum with a feeble median longitudinal channel; legs bright reddish.....*annosus*
2′. Body length not over three and half times as long as it is wide, rather dusky; pronotum without channel; legs somewhat obscure.....*senilis*
3. Body commonly castaneous or dusky ferruginous, rarely fuscous, with griseous pubescence.....*tamsuyensis*

3′. Body usually fuscous.....(4)
4. Scutellum concave, elongate and obtusely pointed behind.....*umber*
4′. Scutellum oblong and channelled.....(5)
5. Prothorax dilated and arcuate at the sides.....*legatus*
5′. Prothorax rather elongate and straight at the sides.....*loochooensis*

33. Melanotus annosus CANDÈZE

vide fauna of Japan, p. 102.
Hab.—Amami-Ôshima: Naze 22–IV, 1930 (R. TAKAHASHI).
Distr.—Japan. Corea and Loo-Choo.

34. Melanotus senilis CANDÈZE

vide fauna of Japan, p. 99.
Hab.—Amami-Ôshima: Naze 22–IV, 1930 (R. TAKAHASHI).
Distr.—Japan and Loo-Choo.

35. Melanotus umber BATES

vide fauna of Formosa, p. 219.
Hab.—Ishigaki Is. 26–III, 1926 (H. YASHIRO).
Distr.—Formosa and Loo-Choo.

36. Melanotus loochooensis MIWA (Pl. VIII, f. 16).

Trans. Nat. Hist. Soc. Formosa, XIX, No. 103, p. 347, (1929) (Loo-Choo).

Fuscous, shining, with tawny pubescence. Head rather flattened, with a fovea between the eyes, densely but rather coarsely punctured, the punctures uneven but somewhat ocellate under microscope; frontal carina well marked, semicircular but somewhat sinuous. Prothorax convex, the widest at the base, gradually narrowing anteriorly, with the sides slightly arcuate densely but rather coarsely punctured on the pronotum; hind angles prolonged backwards and acutely carinate; basal furrow distinct; scutellum elongate, with dense punctulation. Elytra punctate-striate, the interstices finely but unevenly punctulate. Antennae reddish, the second joint smallest and nearly globose, the third twice as long as the second. Legs reddish.

Length: 17 mm. Width: 4½ mm.

Hab.—Okinawa: Naha VIII, (S. SAKAGUCHI); Kunjan VII, 1928 (H. YASHIRO).
Distr.—Loo-Choo.

37. Melanotus tamsuyensis BATES

vide fauna of Formosa, p. 220.
Hab.—Amami-Ôshima: Naze 26–VII, 1932 (T. SHIRARI, S. MINOWA, T. MAKI

and K. KOBAYASHI). Okinawa: Nishibaru 20-V, 1925 (H. YASHIRO). Ishigaki Is. V, 1923 (S. HIRAYAMA).

Distr.—Formosa and Loo-Choo.

Subfamily CORYMBITINAE SCHENKLING

Genus PRISTILOPHUS GERMAR

Key to the Species

1. Body more robust, darker coloured; prothorax more convex, relatively wider, with the sides distinctly arched; 30 mm.....*magnus*
1′. Body dusky, pale reddish brown, rather slender and depressed; prothorax elongate, with the sides somewhat sinuous but not distinctly arched; 23 mm.....*sakaguchii*

38. Pristilophus sakaguchii MIWA (Pl. VIII, f. 18)

Trans. Nat. Hist. Soc. Formosa, XIX, No. 103, p. 348 (1929) (Loo-Choo).

Obscure reddish brown, rather opaque, with short griseous pubescence. Head impressed triangularly in the middle, very densely and somewhat coarsely punctured. Prothorax convex, rather longer than wide, rather sinuate at the side but not well arched, with the punctation very dense, even and rather ocellate on the lateral part of the pronotum, but a little sparser and rather finer on the disk; hind angles acuminate, relatively long and slightly turned outwards, each with a distinct carina; scutellum nearly oblong, minutely and unevenly punctured, with a median longitudinal carina. Elytra strongly punctate-striate, the interstices feebly punctured, coarsely scabrous and rather transversely rugose. Antennae bright reddish brown, opaque, compressed, longer than the head and prothorax combined, the second joint smallest and nearly globose, the third obtuse triangular and twice as long as the preceding joint, from the fourth to the tenth forming a serration. Legs dull brownish.

Length: 23 mm. Width: 6½ mm.

Hab.—Okinawa: Naha VIII, (S. SAKAGUCHI); Shuri 13-IX, 1920 (M. SUZUKI); Kumeshima 2-VII, 1931 (H. YASHIRO). Ishigaki 3-X, 1926 (M. SUZUKI).

Distr.—Loo-Choo.

39. Pristilophus magnus MIWA (Pl. VIII, f. 17)

Trans. Nat. Hist. Soc. Formosa, XIX, No. 103, p. 349, (1929) (Loo-Choo).

Rather fuscous, a little shining, with cinereous pubescence. Head with a triangular impression in the middle, densely but rather coarsely punctured. Prothorax convex, well arched at the sides, very closely but rather coarsely punctured on the pronotum, but the puncture rather denser on the lateral parts than on the disk, with a median longitudinal line which is feebly channelled on the disk, but rather carinate anteriorly as well as posteriorly to the basal rim; hind angles acuminate, distinctly carinate and slightly turned outwards; scutellum nearly oblong, with a median longitudinal carina, densely but rather unevenly punctured. Elytra punctate-striate, the interstices convex, with dense but rather rugose punctation. Antennae brownish, compressed, and shorter than the head and prothorax combined, the form of the each articulation nearly like that of the preceding spccies. Legs obscure brownish.

Length: 30 mm. Width: 8½ mm.

Hab.—Okinawa: Naha VIII, (S. SAKAGUSHI).

Distr.—Loo-Choo.

Subfamily LUDIINAE FLEUTIAUX

Genus LUDIUS BERTHOLD

40. Ludius sieboldi CANDÈZE

vide fauna of Japan, p. 127.

Hab.—Amami-Ôshima: Gusuku to Nishinakama via Santarô-tôge 15-VII, 1933 (T. ESAKI and K. YASUMATSU).

Distr.—Japan, Loo-Choo and Formosa.

One specimen is deposited in the collection of the Entomological Laboratory, Kiushiu Imperial University.

Genus NEOTRICHOPHORUS JAKOBSON

Key to the Species

1. Body entirely fuscous, shining.....*plebejus*
1′. Body black, opaque; elytra bright castaneous brown.....*aureopilosus*

41. Neotrichophorus aureopilosus sp. nov. (Pl. VII, f. 19)

Black, rather opaque, densely clothed with fine golden grey pubescence. Head rather convex, somewhat impressed in the middle, very closely but rather unevenly punctured; front nearly vertical and the carina feebly marked. Prothorax convex and rounded anteriorly, rather parallel at the sides in the posterior half, but gently narrowing anteriorly from the middle, with a close uneven punctation on the pronotum, which is much denser and somewhat coarser on the lateral part than on the disk; hind angles rather obtusely acuminate behind and produced backwards, each with a conspicuous carina; scutellum elongate, convex, nearly tongue-shaped, coarsely punctate on the minutely scabrous surface.

Elytra bright castaneous brown, strongly punctate-striate, the interstices rather flattened, granular and coarsely scabrous, with the apical extremities slightly emarginate. Antennae dark reddish, the three basal joints paler, the second and third joints shortest and nearly globose, thesfourth elongate triangular and longer than the preceding two joints combined. Legs reddish brown, the tarsi reddish.

Length: 11 mm. Width: $2\frac{3}{4}$ mm.

Hab.—Iriomote Is. V, 1932 (S. HIRAYAMA).

42. Neotrichophorus plebejus CANDÈZE

vide fanua of Japan, p. 129.

Hab.—Okinawa VIII, (S. SAKAGUCHI), Miyako Is. 17–V, 1932 (J. SONAN).

Distr.—Japan, Corea, Loo-Choo and Formosa.

Genus AGRIOTES ESCHSCHOLTZ

Key to the Species

1. Pronotum canaliculate in the middle; elytra with the intersices punctured; 11 mm ..... *insularis*
1′. Pronotum not canaliculate; elytra with the interstices granulated; 5–5½ mm..... *hirayamai*

43. Agriotes insularis sp. nov. (Pl. VII, f. 21)

Fuscous, shining, with fine fulvous pubescence. Head convex, coarsely and rather unevenly punctured; punctures very close and somewhat reticulate in front of eyes, but rather sparser in the middle. Prothorax convex, rounded anteriorly and rather parallel sided, with a fine median longitudinal canaliculation on the pronotum, densely and rather evenly punctured on the pronotal surface, but much closer and a little coarser on the anterior corner; hind angles acute, very slightly turned outwards, each with a carina; scutellum nearly tongue-shaped, slightly excavate and finely punctulate. Elytra strongly punctate-striate, the interstices raised, coarsely and rather sparsely punctured, being somewhat transversely rugose. Antennae bright yellow, the second and third joints shortest, nearly obconical and equal in length, the fourth obtuse triangular and much longer than the preceding joint. Legs concolorous with the antennae.

This resembles somewhat *A. fuscus* MIWA, in general outline, but peculiar from the latter by the relatively sparser punctation and median canaliculation on the pronotum.

Length: 11 mm. Width: $2\frac{3}{4}$ mm.

Hab.—Iriomote Is. V, 1932 (S. HIRAYAMA).

44. Agriotes hirayamai sp. nov. (Pl. VII, f. 20)

Castaneous brown or dark reddish brown or sometimes fuscous, shining, covered with short fine fulvous pubescence. Head convex, nearly vertical, slightly impressed longitudinally in the middle, with a close but rather coarse punctation. Prothorax nearly spherical convex, rather rounded anteriorly, very closely and rather evenly punctured on the pronotum, but the punctation much denser and somewhat coarser on the lateral part than on the disk; hind angles acute, produced backwards and distinctly carinate; scutellum slightly convex, nearly elongate triangular, minutely but rather coarsely punctulated. Elytra strongly punctate-striate, the interstices convex, closely granulate and coarsely scabrous. Antennae dark brownish yellow, the three basal joints much paler, the second joint nearly as long as the third but much more robust than the latter, the fourth nearly triangular and longer than each of the preceding two joints. Legs testaceous or fulvous. Under surface commonly reddish yellow.

Length: 5 mm. Width: $1\frac{1}{2}$ mm.

Hab.—Iriomote Is. V, 1932 (S. HIRAYAMA).

Ten individuals of this species have been collected in May from the same island.

Genus AGONISCHIUS CANDÈZE

45. Agonischius obscuripes GYELLENHAL

vide fauna of Japan, p. 130.

Hab.—Ishigaki VII, 1922 (Syu. HIRAYAMA); 22–IV, 1930 (R. TARAHASHI ; V, 1933 (Sawa. HIRAYAMA).

Distr.—Japan (Kiushiu), Corea (var.), Loo-Choo, China, Formosa, Tonkin, Cochin-China, Hindustan, Himalaya and Causasus.

In the Loo-Choo fauna, the following six varieties of this species have been found.

Key to the Varieties

1. Body testaceous; pronotal disk and the lateral margin longitudinally black ...(2)
1′. Body not striped.....(3)
2. Elytra at the sutural part longitudinally black..... *fuscomarginatus*
2′. Elytra at the suture not striped..... *vittiger*
3. Prothorax bright reddish or reddish yellow.....(4)
3′. Prothorax fuscous, rather obscure reddish, opaque, rouuded anteriorly, with the sides rather parallel..... *okinawensis*
4. Head black..... *sanguinicollis*
4′. Head reddish or reddish yellow.....(5)

5. Pronotum bright reddish; elytra black.....*ruficephalus*
5′. Pronotum pale reddish yellow; elytra dull fuscocs.....*iwasakii*

var. **okinawensis** MIWA (Pl. VII, f. 27)

Ins. Mats., II, No. 1, p. 18, pl. I, f. 11, (*Megapenthes*) (1927) (Loo-Choo).

Hab.—Ishigaki Is. 10–V, 1911 (T. IWASAKI); 22–IV, 1930 (R. TAKAHASHI).

Distr.—Loo-Choo.

var. **ruficephalus** MIWA (Pl. VII, f. 26)

vide fauna of Formosa, p. 235.

Hab.—Iriomote Is. V, 1932 (S. HIRAYAMA). Ishigaki Is. 18~27–V, 1933 (S. HIRAYAMA).

Distr.—Formosa and Loo-Choo.

var. **sanguinicollis** MIWA

vide fauna of Formosa, p. 235.

Hab.—Ishigaki Is. 17~22–V, 1933 (S. HIRAYAMA).

Distr.—Formosa and Loo-Choo.

var. **iwasakii** MIWA (Pl. VII, f. 9)

Ins. Mats., II, No. 1, p. 20, Pl. I, f. 16, (*Megapenthes*) (1927) (Loo-Choo).

Hab.—Ishigaki Is. V, 1911 (T. IWASAKI).

Distr.—Loo-Choo.

var. **vittiger** HEYDEN

vide fauna of Formosa, p. 235.

Hab.—Ishigaki Is. 10–V, 1911 (T. IWASAKI); V, 1923 (Shyu. HIRAYAMA); V, 1933 (Sawa. HIRAYAMA). Amami-Ôshima: Naze 25–VI. 1932 (J. SONAN).

Distr.—Corea, China, Formosa and Loo-Choo.

var. **fuscomarginatus** LEWIS (Pl. VII, f. 22)

vide fauna of Formosa, p. 235

Hab.—Amami-Ôshima; Naze 25–VI, 1932 (J. SONAN); 26–VII 1932 (T. SHIRAKI, S. MINOWA, T. MAKI and K. KOBAYASHI). Okinawa: Naha 13–IV, 1925 (H. YASHIRO); Kunjan 21–VI, 1932 (J. SONAN).

Distr.—Formosa and Loo-Choo.

Subfamily **SYNAPTINAE** FLEUTIAUX

Genus **GLYPHONYX** CANDÈZE

Key to the Species

1. Elytra striped or spotted.....(2)

1′. Elytra unicolorous.....(3)
2. Black, shining, with griseous pubescence; antennae and legs clear reddish yellow; elytra sometimes fuscous on the humeral part or wholly testaceous; pronotal posterior angles often fuscous or much paler; 5 mm.....*illepidus*
2′. Dusky black, with somewhat fuscous tint; antennae and legs ferrugineous; $3\frac{3}{4}$ mm.....*pallidipes*
3. Elytra with a reddish yellow spot on the humeral part; $3\frac{1}{2}$–$4\frac{1}{4}$ mm.....*esakii*
3′. Elytra with a longitudinal yellowish stripe on each elytron; $5\frac{1}{4}$ mm.....*iriomotensis*

46. Glyphonyx illepidus CANDÈZE

vide fauna of Japan, p. 136.

Hab.—Okinawa: Shuri 16–V 1913 (H. YASHIRO).

Distr.—Japan and Loo-Choo.

47. Glyphonyx esakii sp. nov.

Black, shining, with a fine griseous pubescence. Head convex but slightly foveolate in the middle, coarsely but sparsely punctured. Prothorax convex, rather longer than wide, nearly parallel sided at the basal half, a little widened before the hind angles and narrowing forward, densely and evenly punctured on the pronotum, but the punctures much closer on the lateral part than on the disk; hind angles acute and turned outwards, each with a long carina; scutellum a little convex, parallel sided and semicircular behind, with a minute and sparse punctation. Elytra punctate-striate, the interstices minutely and very sparsely granulated, with reddish yellow spot on the humeral part, which is occupying on the third to eighth interstices and extending backward from the base to the two fifth of elytra, then becoming gradually obscure. Antennae shining, with long fine pubescence, the four basal joints reddish, the remainders pale brownish yellow. Legs testaceous.

Length: $3\frac{1}{2}$–$4\frac{1}{4}$ mm. Width: 1–$1\frac{1}{4}$ mm.

Hab.—Amami-Ôshima: Gusuku to Nishinakama via Santarô-tôge 15 VII, 1933; Yakkachi in Sumiyomura 18–VII, 1933 (T. ESAKI and K. YASUMATSU).

Twenty two specimens have been collected from Ôshima and the holotype is in the collection of the Entomological Laboratory, Kiushiu Imperial University.

48. Glyphonyx iriomotensis sp. nov.

Black, shiny, covered with short fine golden grey pubescence. Head convex but slightly impressed longitudinally in the middle, rather unevenly and not densely punctured; frontal carina distinct and much elevated. Prothorax convex, longer than wide, the widest at the base, gradually and gently narrowing anteriorly being densely and somewhat evenly punctured on the pronotum, but the punctures finer and a little sparser on the disk than on the lateral part; hind angles

reddish, produced backwards, each with a long carina; basal furrow distinct and somewhat oblique; scutellum slightly convex, nearly oval-shaped, minutely but sparsely punctulate. Elytra punctate-striate, the interstices rather convex, minutely and rather unevenly granulated, rather finely scabrous, with reddish yellow tint occupying the fourth to eighth and rather small part of ninth interstices, which is gradually narrowing and obscure, after all it is confluent in the ground colour on the apical part. Antennae and legs dull yellow.

Length: $5\frac{1}{4}$ mm. Width: $1\frac{1}{4}$ mm.

Hab.—Iriomote Is. VI, 1932 (S. HIRAYAMA).

49. Glyphonyx pallidipes sp. nov.

Fuscous black, shining, convered with fine griseous pubescence. Head convex, closely and somewhat reticulately punctured in the middle, but somewhat sparsely on the vertex; frontal carina conspicuous and well raised. Prothorax convex, rather rounded anteriorly, almost as long as wide, nearly parallel sided in the posterior half, but a little widened before the hind angles, gradually narrowing anteriorly from the middle, being very closely punctured on the lateral part of the pronotum, and much sparsely and finely on the disk; hind angles acute, somewhat scabrous on the surface, and slightly turned outwards, each with an acute long carina which is relatively longer and more conspicuous than in the preceding species. Elytra punctate-striate, the interstices rather plane, finely and rather unevenly granular. Antennae and legs ferruginous.

Length: $3\frac{3}{4}$ mm. Width: 1 mm.

Hab.—Iriomote Is. V, 1932 (S. HIRAYAMA).

Ten specimens have been collected from the same island.

Genus SILESIS CANDÈZE

Key to the Species

1. Head with a median longitudinal impression; frontal carina more or less excavate ..... (2)
1′. Head without impression; frontal carina transverse ..... *okinawensis*
2. Black, with somewhat fuscous tint, cinereous pubescent; prothorax and elytra margined with a reddish tint; pronotum densely, finely and rather evenly punctured ..... *musculus*
2′. Dark chestnut brown, tawny pubescent; pronotum very closely but rather coarsely punctured ..... *sauteri*

50. Silesis okinawensis MIWA (Pl. VII, f. 23)

Ins. Mats., III, No. 2, p. 50, Pl. I, f. 17, (1928) (Loo-Choo).

Bright chestnut brown, shining, clothed with fine golden grey pubescence. Head black, convex, closely but rather coarsely punctured. Prothorax convex, infuscate on the disk of pronotum, somewhat rounded anteriorly, rather parallel sided, but widening a little before the hind angles, closely punctured on the pronotum; hind angles acute, and slightly turned outwards, each with a distinct long carina; scutellum nearly oblong, somewhat elevated longitudinally in the middle. Elytra with punctured striae, the interstices rather plane, minutely and feebly punctured. Antennae somewhat paler, the second joint small, nearly as long as the third, feebly serrate from the fourth. Legs much paler, the lamella of the fourth tarsal joint distinct.

Length: $7\frac{1}{2}$–$9\frac{1}{8}$ mm. Width: $2\frac{1}{4}$–$2\frac{1}{2}$ mm.

Hab.—Okinawa and Ishigaki Is. (MIWA, ibid., 1928). Okinawa: Kunjan 21-VI, 1932 (J. SONAN).

Distr.—Loo-Choo.

51. Silesis sauteri MIWA

vide fauna of Formosa, p. 239.

Hab.—Iriomote Is. VI, 1932 (S. HIRAYAMA).

Distr.—Formosa and Loo-Choo.

52. Silesis musculus CANDÈZE

vide fauna of Japan, p. 137.

Hab.—Amami-Ôshima: Yakkachi in Sumiyomura 21-VII, 1933 (T. ESAKI and K. YASUMATSU).

Distr.—Japan, Corea and Loo-Choo.

Addition to the fauna of Loo-Choo

Platynychus adjutor CANDÈZE

vide fauna of Japan, p. 97.

Hab.—Ishigaki Is. (MIWA, Ins. Mats., II, 2, p. 108, 1927).

Platynychus formosanus MATSUMURA

vide fauna of Formosa, p. 212.

Hab.—Okinawa (MIWA, ibid.).

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EXPLANATION OF PLATE

Elateridae of Japan I

	Species	Body length	Habitat
Fig. 1.	*Adelocera maklini* CANDÈZE	19 mm	Wada-tôge
„ 2.	*Adelocera parallela* LEWIS	12 „	Sapporo
„ 3.	*Adelocera quadrinodata* LEWIS	15 „	Sapporo
„ 4.	*Lacon fuliginosus* CANDÈZE	18 „	Yokohama
„ 5.	*Lacon binodulus* MOTSCHULSKY	16 „	Sapporo
„ 6.	*Lacon cordicollis* CANDÈZE	17 „	Kioto
„ 7.	*Lacon albomaculatus* MIWA	15 „	Gifu
„ 8.	*Lacon microcephalus* MOTSCHULSKY	$3\frac{1}{2}$ „	Kumamoto
„ 9.	*Lacon scrofa* CANDÈZE	$10\frac{1}{2}$ „	Kôbe
„ 10.	*Meristhus niponensis* LEWIS	$4\frac{3}{4}$ „	Niigata
„ 11.	*Meristhus scobinula* CANDÈZE	$2\frac{3}{4}$ „	Nagasaki
„ 12.	*Tetrigus lewisi* CANDÈZE ♀ antenna of the male	28 „	Sapporo Wakayama
„ 13.	*Alaus berus* CANDÈZE	31 „	Bukenji
„ 14.	*Pectocera fortunei* CANDÈZE ♀ antenna of the male	25 „	Mt. Amagi Gifu
„ 15.	*Alaus putridus* CANDÈZE	30 „	Nagasaki
„ 16.	*Melanoxanthus versipellis* LEWIS ♀	8 „	Junsai
„ 17.	*Melanoxanthus versipellis* LEWIS ♂	$7\frac{1}{2}$ „	Junsai
„ 18.	*Melanoxanthus similis* LEWIS	5 „	Fukushima
„ 19.	*Aeoloderma agnata* CANDÈZE	4 „	Yokohama

Elateridae of Japan II

	Species	Body length	Habitat
Fig. 1.	*Melanoxanthus opacus* CANDÈZE	$11\frac{1}{2}$ mm	Junsai
„ 2.	*Elater optabilis* LEWIS	15 „	Miyanoshita
„ 3.	*Elater orientalis* LEWIS	11 „	Kashiwagi
„ 4.	*Elater montanus* LEWIS	$10\frac{1}{2}$ „	Nikkô
„ 5.	*Elater convexicollis* LEWIS	10 „	Nikkô
„ 6.	*Elater scutellaris* LEWIS	$12\frac{1}{2}$ „	Hakone
„ 7.	*Elater puniceus* LEWIS	12 „	Subashiri
„ 8.	*Elater canalicollis* LEWIS	13 „	Oyama

	Species	Body length	Habitat
Fig. 9.	*Elater niponicus* LEWIS	14 mm	Chiuzenji
„ 10.	*Elater sanguinolenthus* SCHRANK	12 „	Sapporo
„ 11.	*Elater vestitus* LEWIS	14 „	Miyanoshita
„ 12.	*Elater tenuistriatus* LEWIS	10 „	Miyanoshita
„ 13.	*Elater hypogastricus* CANDÈZE	15½ „	Nagano
„ 14.	*Elater ivanovi* JAKOBSON	12½ „	Oyayama
„ 15.	*Elater rufipes* LEWIS	11 „	Konose
„ 16.	*Elater carbunculus* LEWIS	7½ „	Miyanoshita
„ 17.	*Elater (Ectamenogonus) rufipennis* LEWIS	12½ „	Oyama
„ 18.	*Elater (Ectamenogonus) bicarinatus* CANDÈZE	10½ „	Kôbe
„ 19.	*Pengamethes bicarinatus* LEWIS	12 „	Nagasaki
„ 20.	*Megapenthes insignitus* LEWIS	6½ „	Subashiri

Elateridae of Japan III

	Species	Body length	Habitat
Fig. 1.	*Megapenthes bifoveolatus* LEWIS	11 mm	Nikkô
„ 2.	*Megapenthes humeralis* MIWA	9½ „	Towada
„ 3.	*Megapenthes gracilis* CANDÈZE	7 „	Yokohama
„ 4.	*Anchastus rufipes* LEWIS	7¼ „	Yuyama (Higo)
„ 5.	*Anchastus aquilis* CANDÈZE	8 „	Kôbe
„ 6.	*Anchastus mus* LEWIS	9 „	Miyanoshita
„ 7.	*Hypnoidus rivalis* LEWIS	4½ „	Mt. Daisetsu (Hokkaidô)
„ 8.	*Hypnoidus quadrillum* CANDÈZE	3½ „	Hakodate
„ 9.	*Hypnoidus cruciatus* CANDÈZE	4½ „	Kôbe
„ 10.	*Crypnoidus humeralis* CANDÈZE	2 „	Nagasaki
„ 11.	*Crypnoidus albipilis* CANDÈZE	3 „	Ôsaka
„ 12.	*Scoliocerus saxatilis* LEWIS	10 „	Chiuzenji
„ 13.	*Curtisius telluris* LEWIS	3½ „	Oyama
„ 14.	*Zorochrus agilis* LEWIS	2¼ „	Miyanoshita
„ 15.	*Zorochrus lewisi* SCHWARZ	1¾ „	Torii-tôge
„ 16.	*Zorochrus curatus* CANDÈZE	4 „	Kumamoto
„ 17.	*Quasimus luteipes* CANDÈZE	2 „	Kôbe
„ 18.	*Quasimus angustatus* MIWA	2½ „	Mt. Sasayama (Iyo)
„ 19.	*Quasimus carinicollis* LEWIS	3¾ „	Miyanoshita
„ 20.	*Quasimus minutissimus* GERMER	1¾ „	Nagasaki
„ 21.	*Quasimus ellipticus* CANDÈZE	2¾ „	Kôbe
„ 22.	*Quasimus ovalis* CANDÈZE	2 „	Nagasaki

	Species	Body length	Habitat
Fig. 23.	*Platynychus pauper* CANDÈZE	12 mm	Miyanoshita
„ 24.	*Platynychus adjutor* CANDÈZE	9½ „	Nishimura (Yamato)
„ 25.	*Platynychus ferrugineus* LEWIS	7½ „	Kumamoto
„ 26.	*Cardiophorus vulgarie* MOTSCHULSKY	8 „	Hakodate
„ 27.	*Paracardiophorus pullatus* CANDÈZE	6½ „	Miyanoshita
„ 28.	*Paracardiophorus sequens* CANDÈZE	6 „	Kôbe
„ 29.	*Paracardiophorus musculus* ERICHSON	8 „	Hakodate

Elateridae of Japan IV

	Species	Body length	Habitat
Fig. 1.	*Spheniscosomus cete* CANDÈZE	18 mm	Suzaka (Shinano)
„ 2.	*Spheniscosomus amussitatus* CANDÈZE	17 „	Mt. Togakushi (Shinano)
„ 3.	*Spheniscosomus restrictus* CANDÈZE	18 „	Ichinotani
„ 4.	*Melanotus lewisi* SCHENKLING	22 „	Wakayama
„ 5.	*Melanotus legatus* CANDÈZE	16½ „	Nagasaki
„ 6.	*Melanotus castanipes* PAYKULL	21 „	Teshio (Hokkaidô)
„ 7.	*Melanotus spernendus* CANDÈZE	12½ „	Hitoyoshi
„ 8.	*Melanotus annosus* CANDÈZE	14½ „	Kôbe
„ 9.	*Melanotus correctus* CANDÈZE	14½ „	Nagasaki
„ 10.	*Melanotus senilis* CANDÈZE	12½ „	Kagoshima
„ 11.	*Melanotus erythropygus* CANDÈZE	9½ „	Nagasaki
„ 12.	*Melanotus invectitius* CANDÈZE	10 „	Miyanoshita
„ 13.	*Melanotus caudex* CANDÈZE	8½ „	Kumamoto
„ 14.	*Melanotus seniculus* CANDÈZE	8 „	Nagasaki
„ 15.	*Limonius niponensis* LEWIS	12 „	Nopporo
„ 16.	*Limonius marginipennis* LEWIS	9½ „	Nikkô
„ 17.	*Limonius marginicollis* LEWIS	7½ „	Miyanoshita
„ 18.	*Limonius ignicollis* LEWIS	7¾ „	Nopporo (Hokkaidô)
„ 19.	*Limonius eximius* LEWIS	8 „	Mt. Takao
„ 20.	*Limonius atricolor* LEWIS	8¾ „	Gifu
„ 21.	*Limonius rufipennis* LEWIS	8 „	Hitoyoshi
„ 22.	*Limonius imitans* LEWIS	7½ „	Miyanoshita
„ 23.	*Limonius vittatus* CANDÈZE	7½ „	Sapporo
„ 24.	*Harminius singularis* LEWIS	15½ „	Towada
„ 25.	*Harminius undosus* LEWIS	15 „	Sôwnkei (Hokkaidô)
„ 26.	*Harminius ainu* MIWA	12½ „	Akan-take (Hokkaidô)

Elateridae of Japan V

	Species	Body length	Habitat
Fig. 1.	*Pheletes montanus* MIWA	8½ mm	Tsubakura-take
„ 2.	*Pheletes aenescens* MIWA	9 „	Toikambetsu.
„ 3.	*Athous* (*Stenagostus*) *umbratilis* LEWIS	18 „	Chiuzenji
„ 4.	*Athous praenobilis* LEWIS	19 „	Junsai
„ 5.	*Athous secessus* CANDÈZE	16 „	Kôbe
„ 6.	*Athous sinuatus* LEWIS ♂	12 „	Chiuzenji
„ 7.	*Athous suturalis* CANDÈZE ♂	11½ „	Fukushima
„ 8.	*Athous porrecticollis* LEWIS	8½ „	Junsai
„ 9.	*Athous* (*Heterathous*) *desertor* CANDÈZE ♀	12 „	Kôbe
„ 10.	*Athous* (*Heterathous*) *virens* CANDÈZE	13 „	Wada-tôge
„ 11.	*Athous* (*Heterathous*) *sanguinicollis* FRIVALDOSZKY var. *flavipennis* MIWA	12½ „	Mt. Daisen
„ 12.	*Athous* (*Heterathous*) *isshikii* MIWA	13 „	Mt. Ôdaigahara
„ 13.	*Athous* (*Grypathous*) *inornatus* LEWIS	11 „	Sapporo
„ 14.	*Athous* (*Grypathous*) *jactatus* LEWIS	9½ „	Nara
„ 15.	*Athous* (*Crepidophorus*) *montanus* MIWA	12½ „	Mt. Daisetsu
„ 16.	*Corymbites* (*Anostirus*) *daimio* LEWIS	12½ „	Hakodate
„ 17.	*Corymbites* (*Actenicerus*) *modestus* LEWIS	10½ „	Chiuzenji
„ 18.	*Corymbites* (*Actenicerus*) *pruinosus* MOTSCHULSKY	17½ „	Chiuzenji
„ 19.	*Corymbites* (*Actenicerus*) *odaisanus* MIWA	16 „	Mt. Ôdaigahara
„ 20.	*Corymbites* (*Actenicerus*) *selectus* CANDÈZE	15 „	Sapporo
„ 21.	*Corymbites* (*Selatosomus*) *kurofunei* MIWA	14½ „	Shimoda
„ 22.	*Corymbites* (*Selatosomus*) *tengu* MIWA	11 „	Mt. Togakushi
„ 23.	*Corymbites* (*Neopristilophus*) *dilatatus* MIWA	13 „	Sapporo
„ 24.	*Corymbites* (*Neopristilophus*) *vagepictus* LEWIS	8½ „	Kumamoto
„ 25.	*Corymbites* (*Neopristilophus*) *onerosus* LEWIS	13 „	Oyama
„ 26.	*Corymbites* (*Neopristilophus*) *testaceipennis* MIWA	11 „	Sapporo
„ 27.	*Corymbites* (*Selatosomus*) *alpensis* MIWA	12½ „	Tsubakura-take
„ 28.	*Corymbites* (*Selatosomus*) *motschulskyi* FLEUTIAUX	11½ „	Tokugo-tôge

Elateridae of Japan VI

	Species	Body length	Habitat
Fig. 1.	*Corymbites* (*Selatosomus*) *notabilis* CANDÈZE	20 mm	Nagasaki
„ 2.	*Corymbites* (*Neopristilophus*) *hypocrita* LEWIS	9½ „	Nikkô

	Species	Body length	Habitat
Fig. 3.	*Corymbites* (*Neopristilophus*)*serrifer* CANDÈZE	16½ mm	Kônose
„ 4.	*Corymbites* (*Selatosomus*) *puncticollis* MOTSCHULSKY	18 „	Chiuzenji
„ 5.	*Corymbites* (*Selatosomus*) *rugosus* GERMAR	12 „	Mt. Daisetsu (Hokkaidô)
„ 6.	*Corymbites* (*Selatosomus*) *lateralis* LECONTE	14 „	Hakodate
„ 7.	*Corymbites* (*Paranomus*) *puerilis* CANDÈZE	8½ „	Nikkô
„ 8.	*Corymbites* (*Paranomus*) *mundulus* LEWIS	8 „	Kiga
„ 9.	*Corymbites* (*Metactenicerus*) *obscuripes* LEWIS	8¾ „	Nikkô
„ 10.	*Corymbites* (*Metactenicerus*) *concolor* LEWIS	8½ „	Yuyama
„ 11.	*Corymbites* (*Metactenicerus*) *nikkoensis* JAKOBSON	11 „	Nikkô
„ 12.	*Corymbites* (*Metactenicerus*) *gratus* LEWIS	13 „	Subashiri
„ 13.	*Corymbites* (*Metactenicerus*) *chlamydatus* LEWIS	13 „	Minomo
„ 14.	*Yezodima aeneoniga* MIWA	9 „	Sapporo
„ 15.	*Yezodima convexum* MIWA	9½ „	Zenibako (Hokkaidô)
„ 16.	*Neotrichophorus junior* CANDÈZE	14 „	Kumamoto
„ 17.	*Neotrichophorus linteatus* CANDÈZE	8½ „	Kôbe
„ 18.	*Neotrichophorus plebejus* CANDÈZE	11 „	Sapporo
„ 19.	*Ludius sieboldi* CANDÈZE	24 „	Sapporo
„ 20.	*Ludius candèzei* LEWIS	25½ „	Nagasaki
„ 21.	*Ludius niponensis* LEWIS	23 „	Chiuzenji
„ 22.	*Agriotes sericeus* CANDÈZE	10½ „	Subashiri
„ 23.	*Agriotes longicollis* LEWIS	13½ „	Nikkô
„ 24.	*Agriotes persimilis* LEWIS	14½ „	Mt. Acan-take
„ 25.	*Agriotes puberulus* MIWA	12½ „	Sapporo
„ 26.	*Agriotes sepes* LEWIS	10 „	Mt. Tsurugi (Shikoku)
„ 27.	*Agriotes elegantulus* LEWIS	6 „	„ „ „
„ 28.	*Agriotes exulatus* CANDÈZE	8¼ „	Kumamoto

Elateridae of Japan VII

	Species	Body length	Habitat
Fig. 1.	*Agriotes palustris* LEWIS	5 mm	Nikkô
„ 2.	*Agriotes helvolus* CANDÈZE	4½ „	Junsai
„ 3.	*Agriotes higonius* LEWIS	10 „	Yuyama
„ 4.	*Agriotes insidiosus* LEWIS	8¾ „	Chiuzenji
„ 5.	*Sericus viridus* LEWIS	8½ „	Kiga
„ 6.	*Glyphonyx illepidus* CANDÈZE	5½ „	Nara
„ 7.	*Agriotes fuscicollis* MIWA	9 „	Sapporo

	Species	Body length	Habitat
Fig. 8.	*Agriotes yasumatsui* MIWA ♀	$6\frac{1}{2}$ mm	Sobosan
„ 9.	*Agriotes yasumatsui* MIWA ♂	$4\frac{3}{4}$ „	Sobosan
„ 10.	*Dolopius marginatus* LINNAEUS, var. *lewisi* FLEUTIAUX	$6\frac{1}{4}$ „	Sapporo
„ 11.	*Silesis musculus* CANDÈZE	$7\frac{1}{4}$ „	Usui-tôge
„ 12.	*Adrastus patagiatus* LEWIS	$5\frac{1}{4}$ „	Aomori
„ 13.	*Denticollis versicolor* LEWIS ♀	15 „	Chiuzenji
„ 14.	*Denticollis versicolor* LEWIS ♂	14 „	Chiuzenji
„ 15.	*Denticollis miniatus* CANDÈZE ♂	12 „	Subashiri
„ 16.	*Denticollis miniatus* CANDÈZE ♀	$12\frac{1}{2}$ „	Subashiri
„ 17.	*Denticollis oculatus* LEWIS ♂	9 „	Subashiri
„ 18.	*Denticollis scutellaris* LEWIS ♀	9 „	Chiuzenji
„ 19.	*Denticollis scutellaris* LEWIS ♂	10 „	Mt. Kirishima
„ 20.	*Elater longipennis* MIWA	10 „	Tokugo-tôge
„ 21.	*Elater galloisi* MIWA	$10\frac{1}{4}$ „	Chiuzenji
„ 22.	*Elater ainu* LEWIS	12 „	Sapporo
„ 23.	*Pengamethes pallidus* LEWIS	$8\frac{1}{2}$ „	Yakushima
„ 24.	*Megapenthes cariniceps* LEWIS	9 „	Chiuzenji
„ 25.	*Melanotus issikii* MIWA	13 „	Yakushima
„ 26.	*Hypoganus mirabilis* MIWA	$13\frac{1}{2}$ „	Gifu
„ 27.	*Limonius approximans* LEWIS	$7\frac{1}{2}$ „	Mt. Daisen
„ 28.	*Orithales yezoensis* MIWA	7 „	Mt. Acan-take
„ 29.	*Corymbites* (*Actenicerus*) *pruinosus*, var. *minoensis* MIWA	$9\frac{1}{2}$ „	Gifu

Elateridae of Loo-Choo

	Species	Body length	Habitat
Fig. 1.	*Lacon musculus* CANDÈZE	9 mm	Kumeshima
„ 2.	*Lacon scrofa* CANDÈZE	10 „	Ôshima: Naze
„ 3.	*Lacon sakaguchii* MIWA	$10\frac{1}{2}$ „	Okinawa: Naha
„ 4.	*Paralacon taciturnus* CANDÈZE	$15\frac{1}{2}$ „	Okinawa: Nishibaru
„ 5.	*Campsosternus matsumurae* MIWA	30 „	Ishigaki
„ 6.	*Sephilus formosanus* SCHWARZ	$11\frac{1}{2}$ „	Iriomote
„ 7.	*Xanthelater granulipennis* MIWA	12 „	Okinawa: Kunjan
„ 8.	*Aeoloderma sinensis* CANDÈZE var.	6 „	Iriomote
„ 9.	*Agonischius obscuripes*, var. *iwasakii* MIWA	11 „	Ishigaki
„ 10.	*Paracardiophorus nigro-apicalis* MIWA	$9\frac{1}{2}$ „	Ishigaki

	Species	Body length	Habitat
Fig. 11.	*Paracardiophorus loochooensis* MIWA	$3\frac{3}{4}$ mm	Iriomote
„ 12.	*Melanoxanthus melanocephalus* FABRICIUS	$7\frac{1}{2}$ „	Okinawa: Nishibaru
„ 13.	*Melanoxanthus sonani* MIWA	10 „	Okinawa: Naha
„ 14.	*Melanoxanthus purcherus* MIWA	$4\frac{3}{4}$ „	Iriomote
„ 15.	*Neodiploconus ferrugineipennis* MIWA	13 „	Iriomote
„ 16.	*Melanotus loochooensis* MIWA	17 „	Okinawa: Naha
„ 17.	*Pristilophus magnus* MIWA	30 „	Okinawa: Naha
„ 18.	*Pristilophus sakaguchii* MIWA	20 „	Okinawa: Shuri
„ 19.	*Niotrichophorus aureopilosus* MIWA	11 „	Iriomote
„ 20.	*Agriotes hirayamae* MIWA	5 „	Iriomote
„ 21.	*Agriotes insuralis* MIWA	11 „	Iriomote
„ 22.	*Agonischius obscuripes*, var. *fuscomarginatus* LEWIS	14 „	Okinawa: Kunjan
„ 23.	*Silesis okinawensis* MIWA	$8\frac{3}{4}$ „	Okinawa: Naha
„ 24.	*Quasimus cordatus* MIWA	$2\frac{1}{4}$ „	Iriomote
„ 25.	*Quasimus takahashii* MIWA	$1\frac{3}{4}$ „	Ishigaki
„ 26.	*Agonischius obscuripes*, var. *ruficephalus* MIWA	$11\frac{1}{2}$ „	Iriomote
„ 27.	do. var. *okinawensis* MIWA	14 „	Ishigaki

Elateridae of Formosa

	Species	Body length	Habitat
Fig. 1.	*Megapenthes ligatus* CANDÈZE	11 mm	Sôzan
„ 2.	*Pengamethes bispinicollis* MIWA	17 „	Suisha
„ 3.	*Agrypnus pescadorensis* MIWA	26 „	Hôkotô
„ 4.	*Elater bimaculatus* MIWA	$12\frac{1}{2}$ „	Tattaka
„ 5.	*Neodiploconus angulatus* CANDÈZE	15 „	Kuraru
„ 6.	*Corymbites* (*Metactenicerus*) *speciosus*, var. *viridus* MIWA	$9\frac{1}{2}$ „	Tattaka
„ 7.	*Silesis sauteri* MIWA	$9\frac{1}{2}$ „	Rimogan
„ 8.	*Agriotides tonkinensis*, var. *formosanus* MIWA	7 „	Musha
„ 9.	*Campsosternus gemma* CANDÈZE	43 „	Nôkô
„ 10.	*Melanoxanthus amianus* MIWA	$5\frac{1}{2}$ „	Kwarenkô
„ 11.	*Athous rufithorax* MIWA	9 „	Urai
„ 12.	*Neodiploconus elegans*, var. *obayashii* MIWA	$11\frac{1}{2}$ „	Urai
„ 13.	*Elater* (*Pseudelater*) *habunensis* MIWA	13 „	Habun
„ 14.	*Denticollis puerilis* MIWA	$10\frac{1}{2}$ „	Arisan
„ 15.	*Denticollis mounaldaui* MIWA	9 „	Musha

Species	Body length	Habitat
Fig. 16. *Athous* (*Heterathous*) *antennatus*, var. *ruficollis* MIWA	6½ mm	Kwarenkô
„ 17. *Melanoxanthus montivagus* MIWA	9 „	Arisan
„ 18. *Corymbites* (*Metactenicerus*) *fuscipes* MIWA	11½ „	Musha
„ 19. *Paralacon argillaceus*, var. *davidi* FAIRMAIRE	15½ „	Arisan
„ 20. *Adelocera ramatasenseni* MIWA	18 „	Musha
„ 21. *Corymbites* (*Actenicerus*) *formosensis* MIWA	20½ „	Hinokiyama
„ 22. *Melanoxanthus 4-guttatus* MIWA	12 „	Horisha
„ 23. *Csikia taiwana* MIWA	10 „	Baibara

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PLATE I

EXPLANATION OF PLATE

Elateridae of Japan I

Species	Body length	Habitat
Fig. 1. *Adelocera maklini* CANDÈZE	19 mm	Wada-tôge
„ 2. *Adelocera parallela* LEWIS	12 „	Sapporo
„ 3. *Adelocera quadrinodata* LEWIS	15 „	Sapporo
„ 4. *Lacon fuliginosus* CANDÈZE	18 „	Yokohama
„ 5. *Lacon binodulus* MOTSCHULSKY	16 „	Sapporo
„ 6. *Lacon cordicollis* CANDÈZE	17 „	Kioto
„ 7. *Lacon albomaculatus* MIWA	15 „	Gifu
„ 8. *Lacon microcephalus* MOTSCHULSKY	$3\frac{1}{2}$ „	Kumamoto
„ 9. *Lacon scrofa* CANDÈZE	$10\frac{1}{2}$ „	Kôbe
„ 10. *Meristhus niponensis* LEWIS	$4\frac{3}{4}$ „	Niigata
„ 11. *Meristhus scobinula* CANDÈZE	$2\frac{3}{4}$ „	Nagasaki
„ 12. *Tetrigus lewisi* CANDÈZE ♀	28 „	Sapporo
antenna of the male		Wakayama
„ 13. *Alaus berus* CANDÈZE	31 „	Bukenji
„ 14. *Pectocera fortunei* CANDÈZE ♀	25 „	Mt. Amagi
antenna of the male		Gifu
„ 15. *Alaus putridus* CANDÈZE	30 „	Nagasaki
„ 16. *Melanoxanthus versipellis* LEWIS ♀	8 „	Junsai
„ 17. *Melanoxanthus versipellis* LEWIS ♂	$7\frac{1}{2}$ „	Junsai
„ 18. *Melanoxanthus similis* LEWIS	5 „	Fukushima
„ 19. *Aeoloderma agnata* CANDÈZE	4 „	Yokohama

Plate I

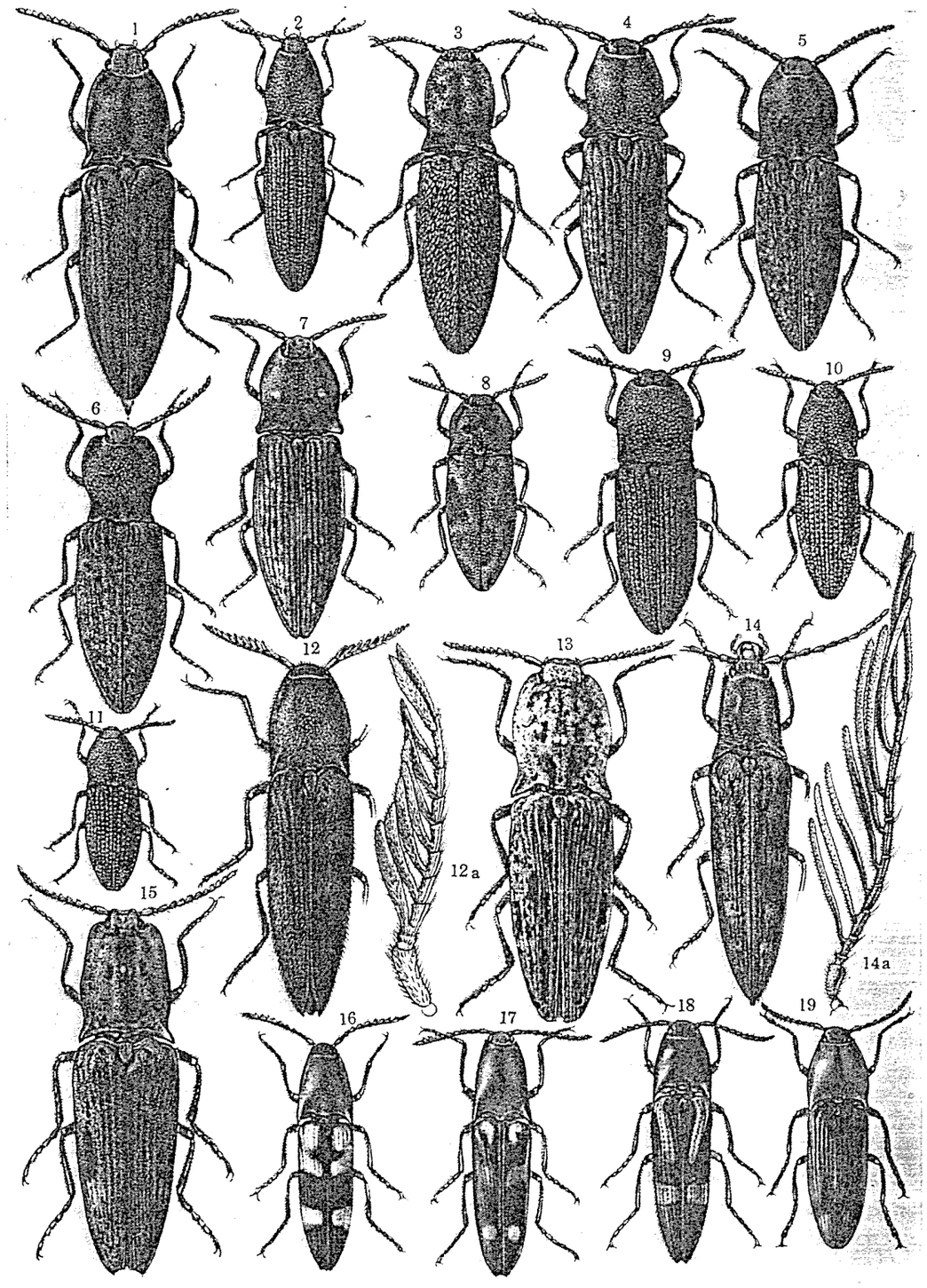

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PLATE II

EXPLANATION OF PLATE

Elateridae of Japan II

	Species	Body length	Habitat
Fig. 1.	*Melanoxanthus opacus* CANDÈZE	11½ mm	Junsai
„ 2.	*Elater optabilis* LEWIS	15 „	Miyanoshita
„ 3.	*Elater orientalis* LEWIS	11 „	Kashiwagi
„ 4.	*Elater montanus* LEWIS	10½ „	Nikkô
„ 5.	*Elater convexicollis* LEWIS	10 „	Nikkô
„ 6.	*Elater scutellaris* LEWIS	12½ „	Hakone
„ 7.	*Elater puniceus* LEWIS	12 „	Subashiri
„ 8.	*Elater canalicollis* LEWIS	13 „	Oyama
„ 9.	*Elater niponicus* LEWIS	14 „	Chiuzenji
„ 10.	*Elater sanguinolenthus* SCHRANK	12 „	Sapporo
„ 11.	*Elater vestitus* LEWIS	14 „	Miyanoshita
„ 12.	*Elater tenuistriatus* LEWIS	10 „	Miyanoshita
„ 13.	*Elater hypogastricus* CANDÈZE	15½ „	Nagano
„ 14.	*Elater ivanovi* JAKOBSON	12½ „	Oyayama
„ 15.	*Elater rufipes* LEWIS	11 „	Konose
„ 16.	*Elater carbunculus* LEWIS	7½ „	Miyanoshita
„ 17.	*Elater* (*Ectamenogonus*) *rufipennis* LEWIS	12½ „	Oyama
„ 18.	*Elater* (*Ectamenogonus*) *bicarinatus* CANDÈZE	10½ „	Kôbe
„ 19.	*Pengamethes bicarinatus* LEWIS	12 „	Nagasaki
„ 20.	*Megapenthes insignitus* LEWIS	6½ „	Subashiri

Plate II

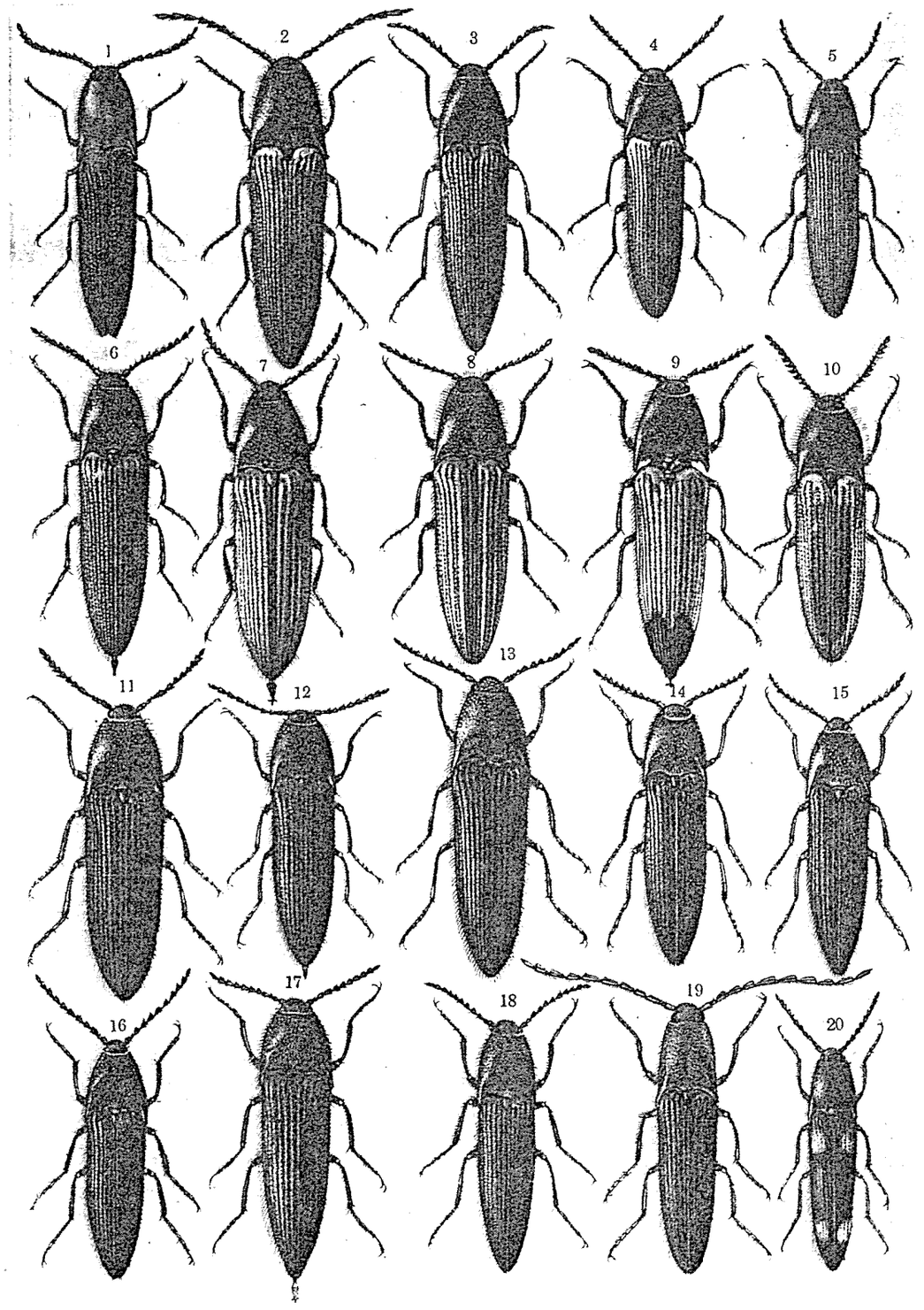

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PLATE III

EXPLANATION OF PLATE

Elateridae of Japan III

	Species	Body length	Habitat
Fig. 1.	*Megapenthes bifoveolatus* LEWIS	11 mm	Nikkô
„ 2.	*Megapenthes humeralis* MIWA	9½ „	Towada
„ 3.	*Megapenthes gracilis* CANDÈZE	7 „	Yokohama
„ 4.	*Anchastus rufipes* LEWIS	7¼ „	Yuyama (Higo)
„ 5.	*Anchastus aquilis* CANDÈZE	8 „	Kôbe
„ 6.	*Anchastus mus* LEWIS	9 „	Miyanoshita
„ 7.	*Hypnoidus rivalis* LEWIS	4½ „	Mt. Daisetsu (Hokkaidô)
„ 8.	*Hypnoidus quadrillum* CANDÈZE	3½ „	Hakodate
„ 9.	*Hypnoidus cruciatus* CANDÈZE	4½ „	Kôbe
„ 10.	*Crypnoidus humeralis* CANDÈZE	2 „	Nagasaki
„ 11.	*Crypnoidus albipilis* CANDÈZE	3 „	Ôsaka
„ 12.	*Scoliocerus saxatilis* LEWIS	10 „	Chiuzenji
„ 13.	*Curtisius telluris* LEWIS	3½ „	Oyama
„ 14.	*Zorohrus cagilis* LEWIS	2⅓ „	Miyanoshita
„ 15.	*Zorochrus lewisi* SCHWARZ	1¾ „	Torii-tôge
„ 16.	*Zorochrus curatus* CANDÈZE	4 „	Kumamoto
„ 17.	*Quasimus luteipes* CANDÈZE	2 „	Kôbe
„ 18.	*Quasimus angustatus* MIWA	2⅕ „	Mt. Sasayama (Iyo
„ 19.	*Quasimus carinicollis* LEWIS	3¾ „	Miyanoshita
„ 20.	*Quasimus minutissimus* GERMER	1¾ „	Nagasaki
„ 21.	*Quasimus ellipticus* CANDÈZE	2¾ „	Kôbe
„ 22.	*Quasimus ovalis* CANDÈZE	2 „	Nagasaki
„ 23.	*Platynychus pauper* CANDÈZE	12 „	Miyanoshita
„ 24.	*Platynychus adjutor* CANDÈZE	9½ „	Nishimura (Yamato)
„ 25.	*Platynychus ferrugineus* LEWIS	7½ „	Kumamoto
„ 26.	*Cardiophorus vulgarie* MOTSCHULSKY	8 „	Hakodate
„ 27.	*Paracardiophorus pullatus* CANDÈZE	6½ „	Miyanoshita
„ 28.	*Paracardiophorus sequens* CANDÈZE	6 „	Kôbe
„ 29.	*Paracardiophorus musculus* ERICHSON	8 „	Hakodate

Plate III

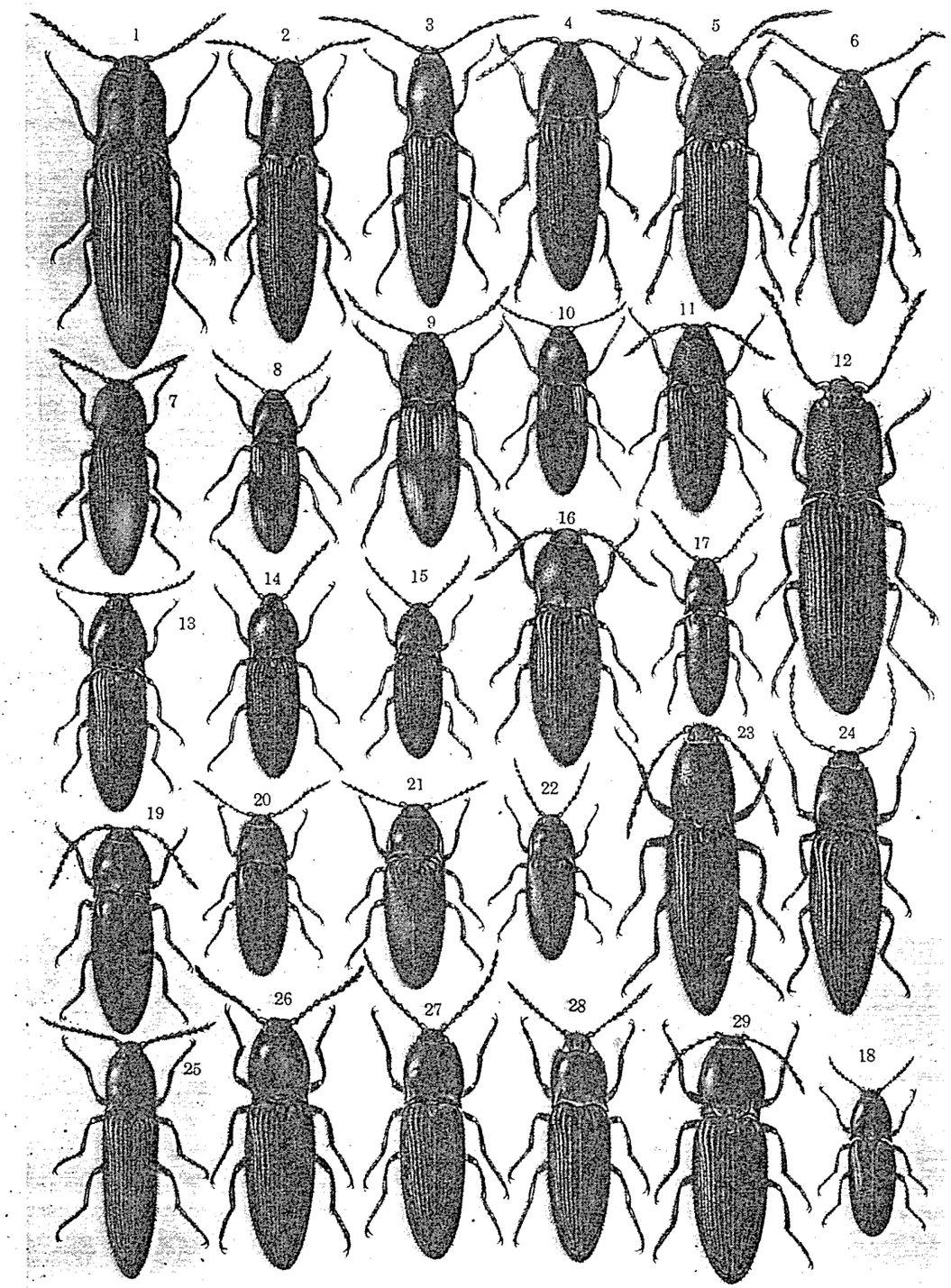

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PLATE IV

EXPLANATION OF PLATE

Elateridae of Japan IV

Species	Body length	Habitat
Fig. 1. *Spheniscosomus cete* CANDÈZE	18 mm	Suzaka (Shinano)
„ 2. *Spheniscosomus amussitatus* CANDÈZE	17 „	Mt. Togakushi (Shinano)
„ 3. *Spheniscosomus restrictus* CANDÈZE	18 „	Ichinotani
„ 4. *Melanotus lewisi* SCHENKLING	22 „	Wakayama
„ 5. *Melanotus legatus* CANDÈZE	16½ „	Nagasaki
„ 6. *Melanotus castanipes* PAYKULL	21 „	Teshio (Hokkaidô)
„ 7. *Melanotus spernendus* CANDÈZE	12½ „	Hitoyoshi
„ 8. *Melanotus annosus* CANDÈZE	14½ „	Kôbe
„ 9. *Melanotus correctus* CANDÈZE	14½ „	Nagasaki
„ 10. *Melanotus senilis* CANDÈZE	12½ „	Kagoshima
„ 11. *Melanotus erythropygus* CANDÈZE	9½ „	Nagasaki
„ 12. *Melanotus invectitius* CANDÈZE	10 „	Miyanoshita
„ 13. *Melanotus caudex* CANDÈZE	8½ „	Kumamoto
„ 14. *Melanotus seniculus* CANDÈZE	8 „	Nagasaki
„ 15. *Limonius niponensis* LEWIS	12 „	Nopporo
„ 16. *Limonius marginipennis* LEWIS	9½ „	Nikkô
„ 17. *Limonius marginicollis* LEWIS	7½ „	Miyanoshita
„ 18. *Limonius ignicollis* LEWIS	7¾ „	Nopporo (Hokkaidô)
„ 19. *Limonius eximius* LEWIS	8 „	Mt. Takao
„ 20. *Limonius atricolor* LEWIS	8¾ „	Gifu
„ 21. *Limonius rufipennis* LEWIS	8 „	Hitoyoshi
„ 22. *Limonius imitans* LEWIS	7½ „	Miyanoshita
„ 23. *Limonius vittatus* CANDÈZE	7½ „	Sapporo
„ 24. *Harminius singularis* LEWIS	15½ „	Towada
„ 25. *Harminius undosus* LEWIS	15 „	Sôwnkei (Hokkaidô)
„ 26. *Harminius ainu* MIWA	12½ „	Akan-take (Hokkaidô)

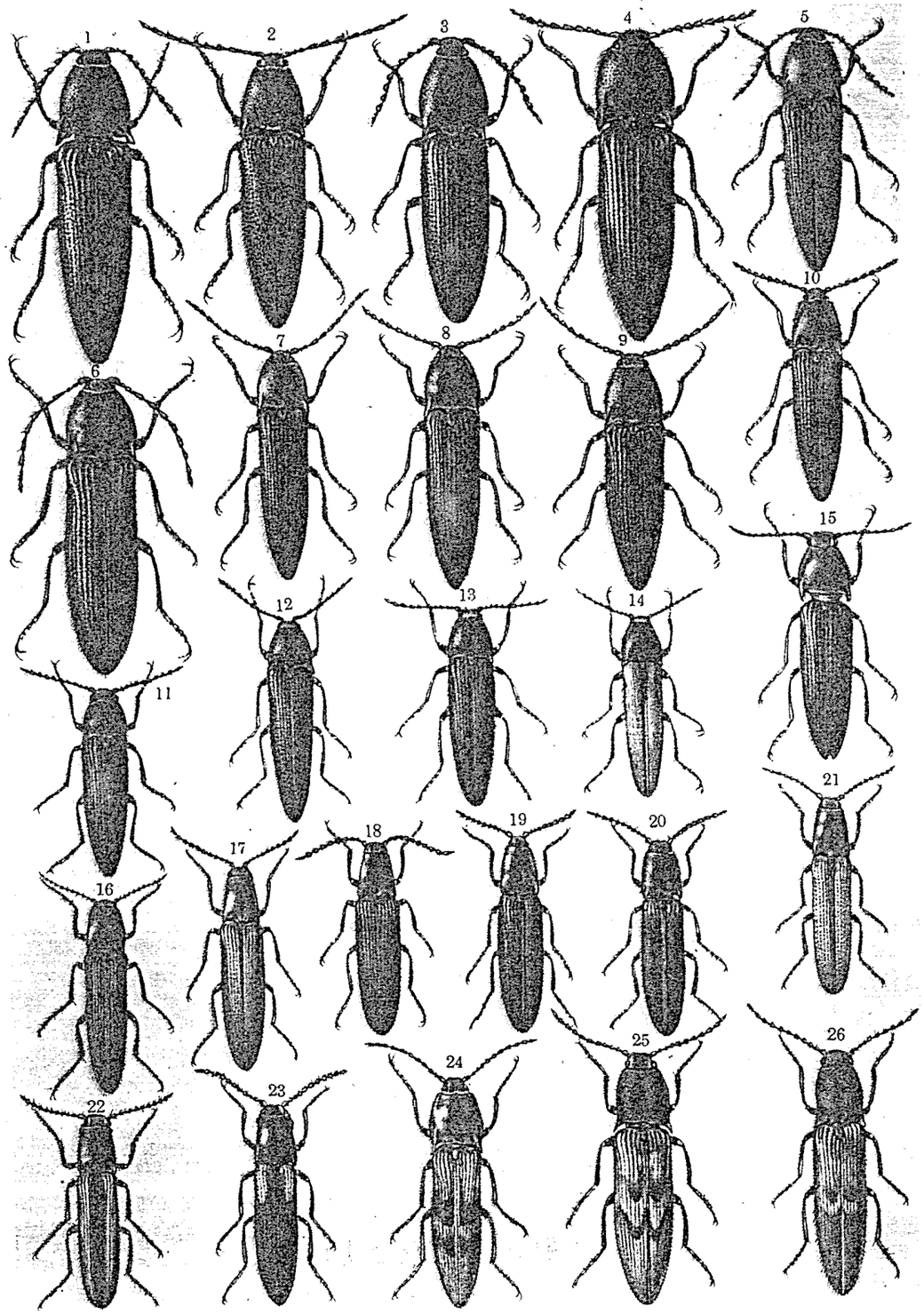

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PLATE V

EXPLANATION OF PLATE

Elateridae of Japan V

Species	Body length	Habitat
Fig. 1. *Pheletes montanus* MIWA	8½ mm	Tsubakura-take
„ 2. *Pheletes aenescens* MIWA	9 „	Toikambetsu
„ 3. *Athous* (*Stenagostus*) *umbratilis* LEWIS	18 „	Chiuzenji
„ 4. *Athous praenobilis* LEWIS	19 „	Junsai
„ 5. *Athous secessus* CANDÈZE	16 „	Kôbe
„ 6. *Athous sinuatus* LEWIS ♂	12 „	Chiuzenji
„ 7. *Athous suturalis* CANDÈZE ♂	11½ „	Fukushima
„ 8. *Athous porrecticollis* LEWIS	8½ „	Junsai
„ 9. *Athous* (*Heterathous*) *desertor* CANDÈZE ♀	12 „	Kôbe
„ 10. *Athous* (*Heterathous*) *virens* CANDÈZE	13 „	Wada-tôge
„ 11. *Athous* (*Heterathous*) *sanguinicollis* FRIVALDOSZKY var. *flavipennis* MIWA	12½ „	Mt. Daisen
„ 12. *Athous* (*Heterathous*) *isshikii* MIWA	13 „	Mt. Ôdaigahara
„ 13. *Athous* (*Grypathous*) *inornatus* LEWIS	11 „	Sapporo
„ 14. *Athous* (*Grypathous*) *jactatus* LEWIS	9½ „	Nara
„ 15. *Athous* (*Crepidophorus*) *montanus* MIWA	12½ „	Mt. Daisetsu
„ 16. *Corymbites* (*Anostirus*) *daimio* LEWIS	12½ „	Hakodate
„ 17. *Corymbites* (*Actenicerus*) *modestus* LEWIS	10½ „	Chiuzenji
„ 18. *Corymbites* (*Actenicerus*) *pruinosus* MOTSCHULSKY	17½ „	Chiuzenji
„ 19. *Corymbites* (*Actenicerus*) *odaisanus* MIWA	16 „	Mt. Ôdaigahara
„ 20. *Corymbites* (*Actenicerus*) *selectus* CANDÈZE	15 „	Sapporo
„ 21. *Corymbites* (*Selatosomus*) *kurofunei* MIWA	14½ „	Shimoda
„ 22. *Corymbites* (*Selatosomus*) *tengu* MIWA	11 „	Mt. Togakushi
„ 23. *Corymbites* (*Neopristilophus*) *dilatatus* MIWA	13 „	Sapporo
„ 24. *Corymbites* (*Neopristilophus*) *vagepictus* LEWIS	8½ „	Kumamoto
„ 25. *Corymbites* (*Neopristilophus*) *onerosus* LEWIS	13 „	Oyama
„ 26. *Corymbites* (*Neopristilophus*) *testaceipennis* MIWA	11 „	Sapporo
„ 27. *Corymbites* (*Selatosomus*) *alpensis* MIWA	12½ „	Tsubakura-take
„ 28. *Corymbites* (*Selatosomus*) *motschulskyi* FLEUTIAUX	11½ „	Tokugo-tôge

Plate V

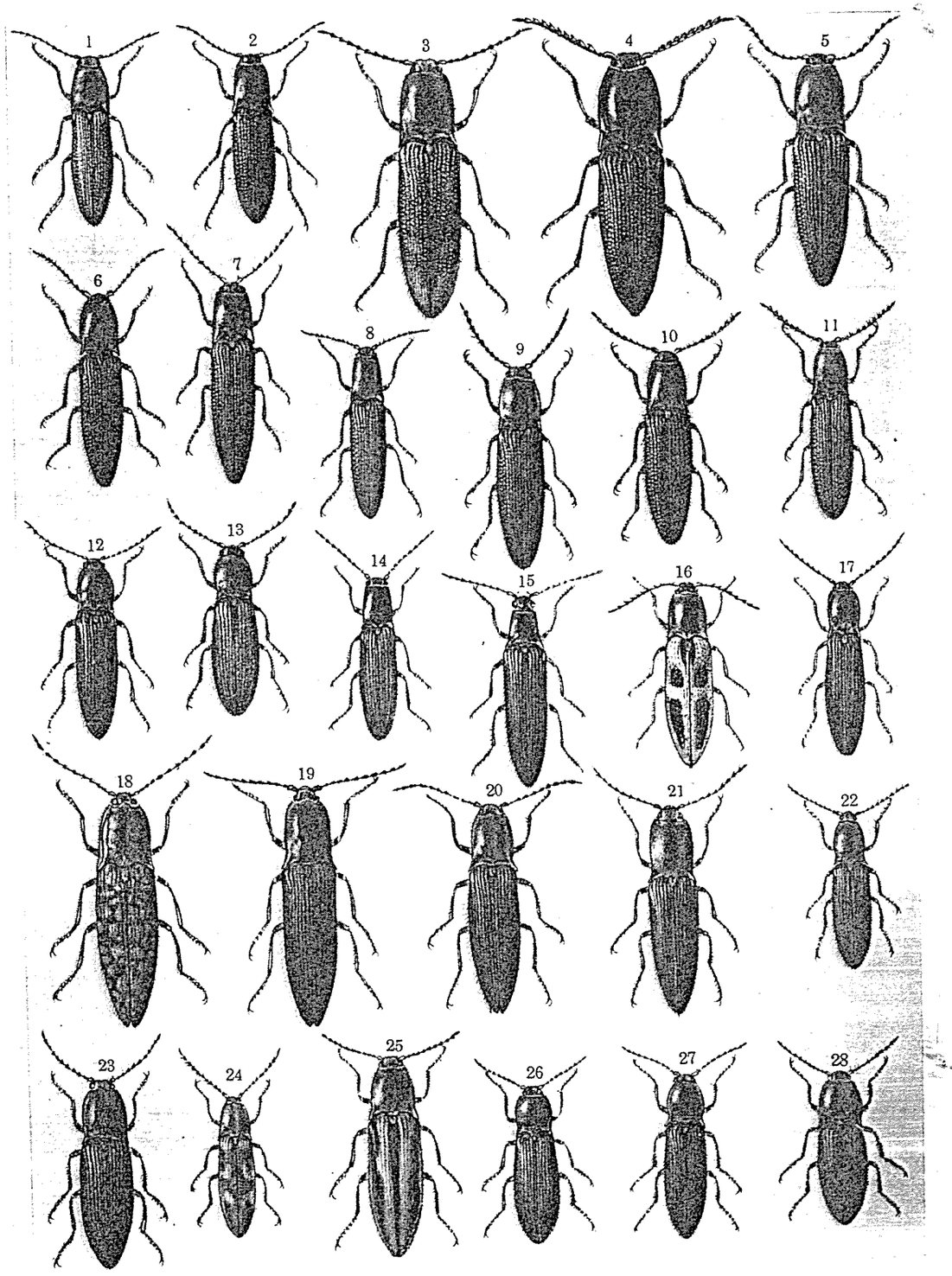

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PLATE VI

EXPLANATION OF PLATE

Elateridae of Japan VI

	Species	Body length	Habitat
Fig. 1.	*Corymbites* (*Selatosomus*) *notabilis* CANDÈZE	20 mm	Nagasaki
„ 2.	*Corymbites* (*Neopristilophus*) *hypocrita* LEWIS	9½ „	Nikkô
„ 3.	*Corymbites* (*Neopristilophus*)*serrifer* CANDÈZE	16½ „	Kônose
„ 4.	*Corymbites* (*Selatosomus*) *puncticollis* MOTSCHULSKY	18 „	Chiuzenji
„ 5.	*Corymbites* (*Selatosomus*) *rugosus* GERMAR	12 „	Mt. Daisetsu (Hokkaidô)
„ 6.	*Corymbites* (*Selatosomus*) *lateralis* LECONTE	14 „	Hakodate
„ 7.	*Corymbites* (*Paranomus*) *puerilis* CANDÈZE	8½ „	Nikkô
„ 8.	*Corymbites* (*Paranomus*) *mundulus* LEWIS	8 „	Kiga
„ 9.	*Corymbites* (*Metactenicerus*) *obscuripes* LEWIS	8¾ „	Nikkô
„ 10.	*Corymbites* (*Metactenicerus*) *concolor* LEWIS	8½ „	Yuyama
„ 11.	*Corymbites* (*Metactenicerus*) *nikkoensis* JAKOBSON	11 „	Nikkô
„ 12.	*Corymbites* (*Metactenicerus*) *gratus* LEWIS	13 „	Subashiri
„ 13.	*Corymbites* (*Metactenicerus*) *chlamydatus* LEWIS	13 „	Minomo
„ 14.	*Yezodima aeneoniga* MIWA	9 „	Sapporo
„ 15.	*Yezodima convexum* MIWA	9½ „	Zenibako (Hokkaidô)
„ 16.	*Neotrichophorus junior* CANDÈZE	14 „	Kumamoto
„ 17.	*Neotrichophorus linteatus* CANDÈZE	8½ „	Kôbe
„ 18.	*Neotrichophorus plebejus* CANDÈZE	11 „	Sapporo
„ 19.	*Ludius sieboldi* CANDÈZE	24 „	Sapporo
„ 20.	*Ludius candèzei* LEWIS	25½ „	Nagasaki
„ 21.	*Ludius niponensis* LEWIS	23 „	Chiuzenji
„ 22.	*Agriotes sericeus* CANDÈZE	10½ „	Subashiri
„ 23.	*Agriotes longicollis* LEWIS	13½ „	Nikkô
„ 24.	*Agriotes persimilis* LEWIS	14½ „	Mt. Acan-take
„ 25.	*Agriotes puberulus* MIWA	12½ „	Sapporo
„ 26.	*Agriotes sepes* LEWIS	10 „	Mt. Tsurugi (Shikoku)
„ 27.	*Agriotes elegantulus* LEWIS	6 „	„ „ „
„ 28.	*Agriotes exulatus* CANDÈZE	8¼ „	Kumamoto

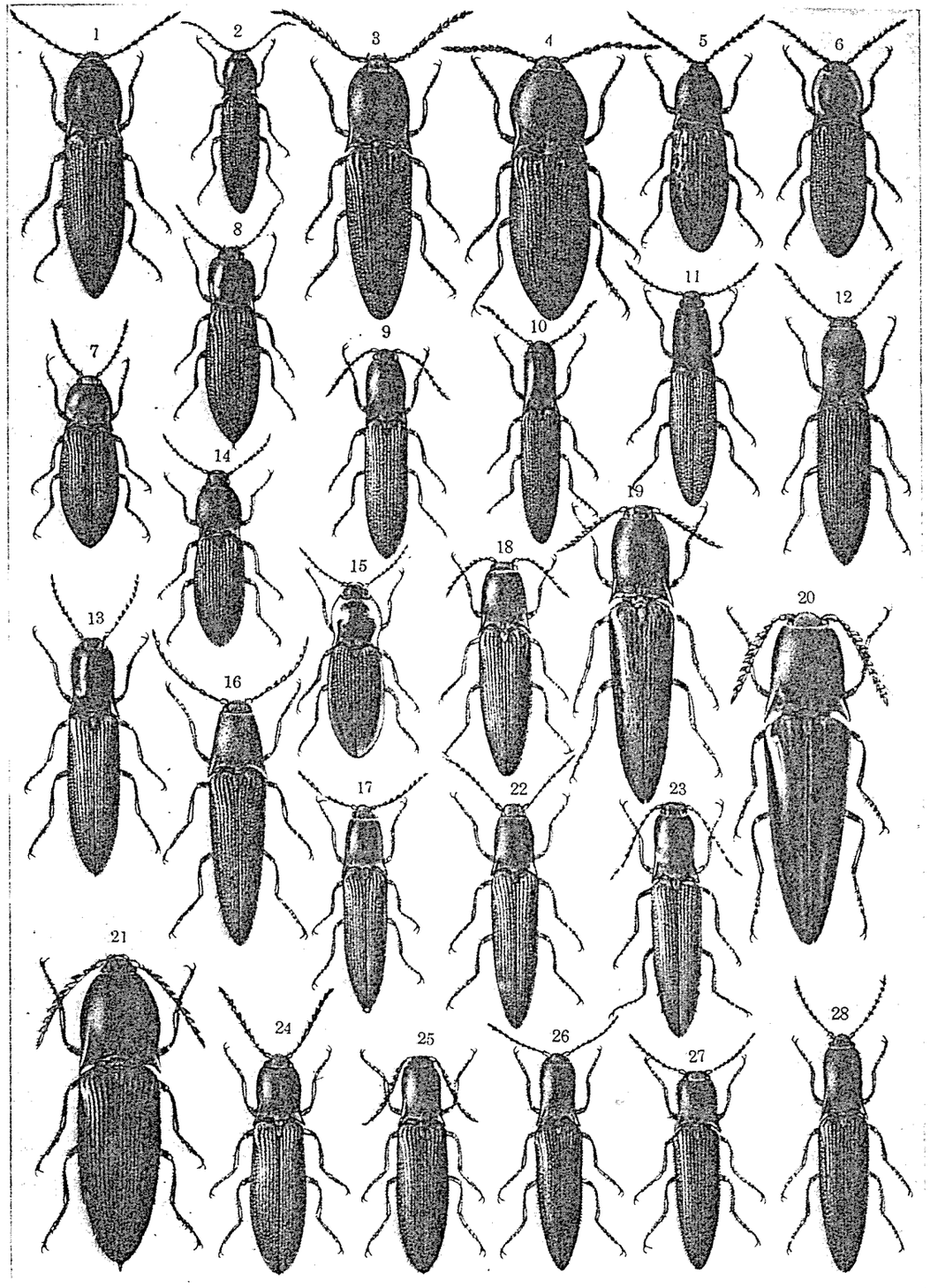

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PLATE VII

EXPLANATION OF PLATE

Elateridae of Japan VII

	Species	Body length	Habitat
Fig. 1.	*Agriotes palustris* LEWIS	5 mm	Nikkô
„ 2.	*Agriotes helvolus* CANDÈZE	4½ „	Junsai
„ 3.	*Agriotes higonius* LEWIS	10 „	Yuyama
„ 4.	*Agriotes insidiosus* LEWIS	8¾ „	Chiuzenji
„ 5.	*Sericus viridus* LEWIS	8½ „	Kiga
„ 6.	*Glyphonyx illepidus* CANDÈZE	5½ „	Nara
„ 7.	*Agriotes fuscicollis* MIWA	9 „	Sapporo
„ 8.	*Agriotes yasumatsui* MIWA ♀	6⅝ „	Sobosan
„ 9.	*Agriotes yasumatsui* MIWA ♂	4¾ „	Sobosan
„ 10.	*Dolopius marginatus* LINNAEUS, var. *lewisi* FLEUTIAUX	6¼ „	Sapporo
„ 11.	*Silesis musculus* CANDÈZE	7¼ „	Usui-tôge
„ 12.	*Adrastus patagiatus* LEWIS	5¼ „	Aomori
„ 13.	*Denticollis versicolor* LEWIS ♀	15 „	Chiuzenji
„ 14.	*Denticollis versicolor* LEWIS ♂	14 „	Chiuzenji
„ 15.	*Denticollis miniatus* CANDÈZE ♂	12 „	Subashiri
„ 16.	*Denticollis miniatus* CANDÈZE ♀	12½ „	Subashiri
„ 17.	*Denticollis oculatus* LEWIS ♂	9 „	Subashiri
„ 18.	*Denticollis scutellaris* LEWIS ♀	9 „	Chiuzenji
„ 19.	*Denticollis scutellaris* LEWIS ♂	10 „	Mt. Kirishima
„ 20.	*Elater longipennis* MIWA	10. „	Tokugo-tôge
„ 21.	*Elater galloisi* MIWA	10¼ „	Chiuzenji
„ 22.	*Elater ainu* LEWIS	12 „	Sapporo
„ 23.	*Pengamethes pallidus* LEWIS	8½ „	Yakushima
„ 24.	*Megapenthes cariniceps* LEWIS	9 „	Chiuzenji
„ 25.	*Melanotus issikii* MIWA	13 „	Yakushima
„ 26.	*Hypoganus mirabilis* MIWA	13½ „	Gifu
„ 27.	*Limonius approximans* LEWIS	7½ „	Mt. Daisen
„ 28.	*Orithales yezoensis* MIWA	7 „	Mt. Acan-take
„ 29.	*Corymbites* (*Actenicerus*) *pruinosus*, var. *minoensis* MIWA	9½ „	Gifu

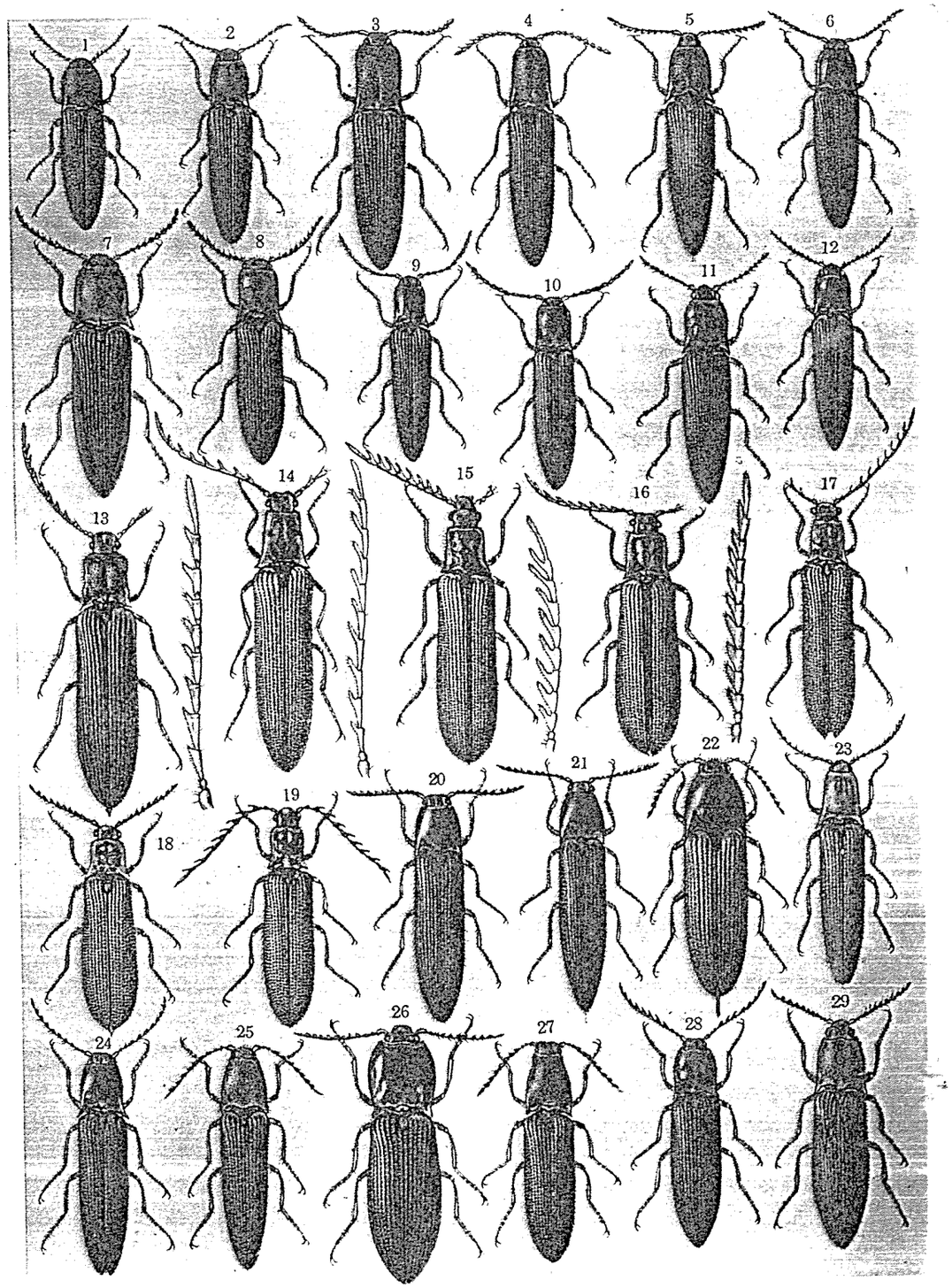

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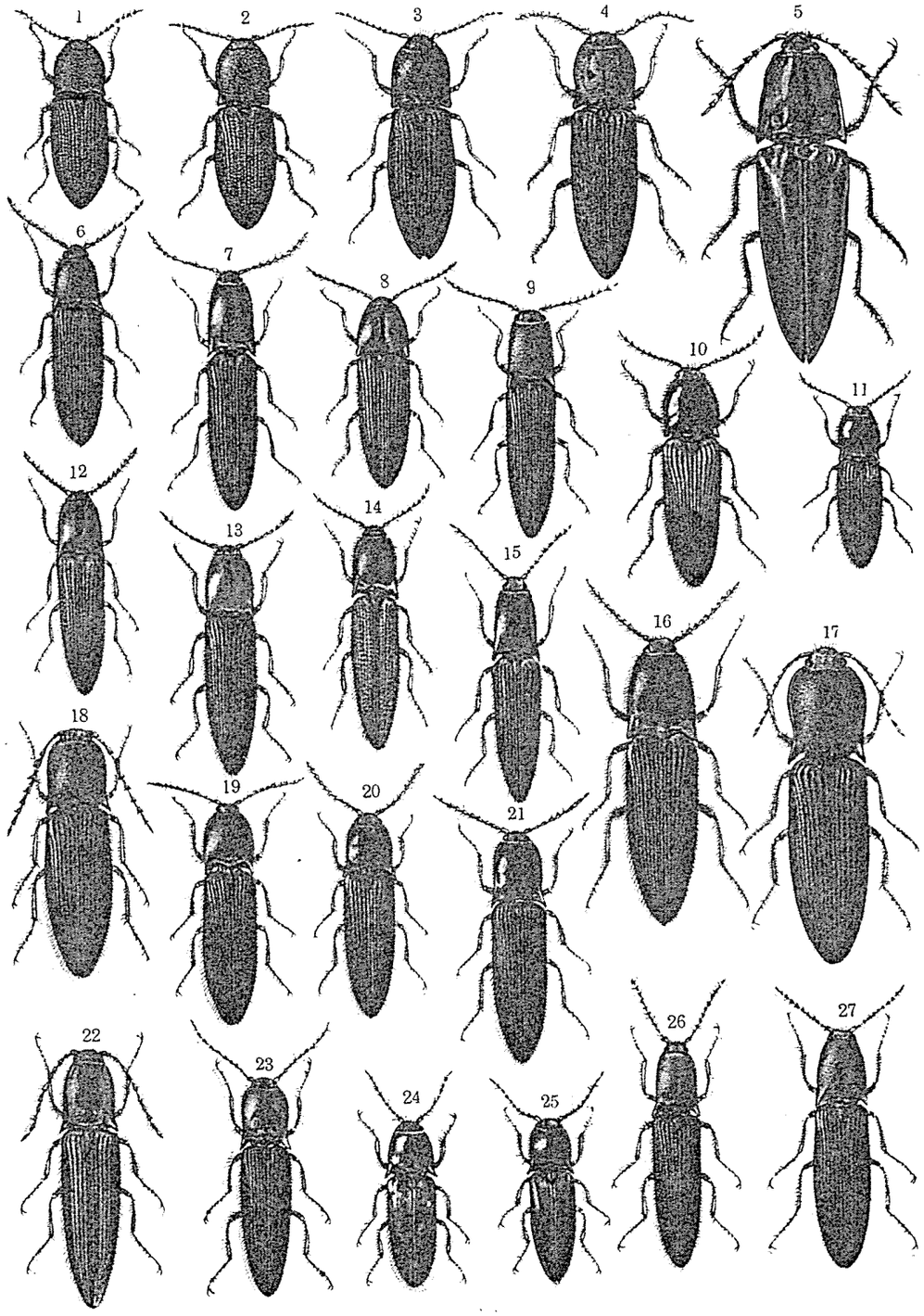
PLATE VIII

EXPLANATION OF PLATE

Elateridae of Loo-Choo

	Species	Body length	Habitat
Fig. 1.	*Lacon musculus* CANDÈZE	9 mm	Kumeshima
„ 2.	*Lacon scrofa* CANDÈZE	10 „	Ôshima: Naze
„ 3.	*Lacon sakaguchii* MIWA	10½ „	Okinawa: Naha
„ 4.	*Paralacon taciturnus* CANDÈZE	15⅓ „	Okinawa: Nishibaru
„ 5.	*Campsosternus matsumurae* MIWA	30 „	Ishigaki
„ 6.	*Sephilus formosanus* SCHWARZ	11½ „	Iriomote
„ 7.	*Xanthelater granulipennis* MIWA	12 „	Okinawa: Kunjan
„ 8.	*Aeoloderma sinensis* CANDÈZE var.	6 „	Iriomote
„ 9.	*Agonischius obscuripes*, var. *iwasakii* MIWA	11 „	Ishigaki
„ 10.	*Paracardiophorus nigro-apicalis* MIWA	9½ „	Ishigaki
„ 11.	*Paracardiophorus loochooensis* MIWA	3¾ „	Iriomote
„ 12.	*Melanoxanthus melanocephalus* FABRICIUS	7½ „	Okinawa: Nishibaru
„ 13.	*Melanoxanthus sonani* MIWA	10 „	Okinawa: Naha
„ 14.	*Melanoxanthus purcherus* MIWA	4¾ „	Iriomote
„ 15.	*Neodiploconus ferrugineipennis* MIWA	13 „	Iriomote
„ 16.	*Melanotus loochooensis* MIWA	17 „	Okinawa: Naha
„ 17.	*Pristilophus magnus* MIWA	30 „	Okinawa: Naha
„ 18.	*Pristilophus sakaguchii* MIWA	20 „	Okinawa: Shuri
„ 19.	*Niotrichophorus aureopilosus* MIWA	11 „	Iriomote
„ 20.	*Agriotes hirayamae* MIWA	5 „	Iriomote
„ 21.	*Agriotes insuralis* MIWA	11 „	Iriomote
„ 22.	*Agonischius obscuripes*, var. *fuscomarginatus* LEWIS	14 „	Okinawa: Kunjan
„ 23.	*Silesis okinawensis* MIWA	8¾ „	Okinawa: Naha
„ 24.	*Quasimus cordatus* MIWA	2¼ „	Iriomote
„ 25.	*Quasimus takahashii* MIWA	1¾ „	Ishigaki
„ 26.	*Agonischius obscuripes*, var. *ruficephalus* MIWA	11½ „	Iriomote
„ 27.	do. var. *okinawensis* MIWA	14 „	Ishigaki



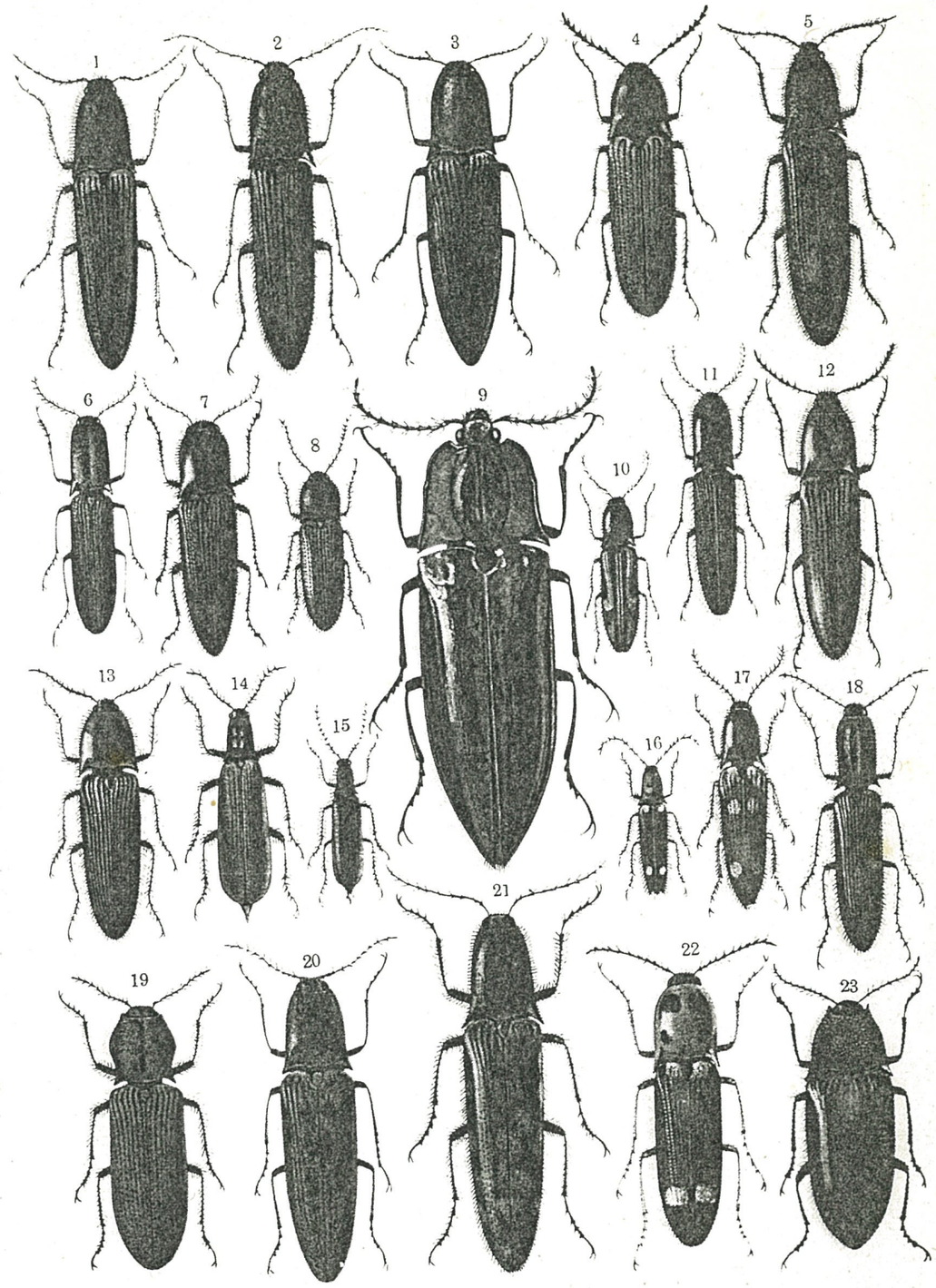
Del. B. Sakuma

PLATE IX

EXPLANATION OF PLATE

Elateridae of Formosa

	Species	Body length	Habitat
Fig. 1.	*Megapenthes ligatus* CANDÈZE	11 mm	Sôzan
" 2.	*Pengamethes bispinicollis* MIWA	17 "	Suisha
" 3.	*Agrypnus pescadorensis* MIWA	26 "	Hôkotô
" 4.	*Elater bimaculatus* MIWA	12½ "	Tattaka
" 5.	*Neodiploconus angulatus* CANDÈZE	15 "	Kuraru
" 6.	*Corymbites* (*Metactenicerus*) *speciosus*, var. *viridus* MIWA	9½ "	Tattaka
" 7.	*Silesis sauteri* MIWA	9½ "	Rimogan
" 8.	*Agriotides tonkinensis*, var. *formosanus* MIWA	7 "	Musha
" 9.	*Campsosternus gemma* CANDÈZE	43 "	Nôkô
" 10.	*Melanoxanthus amianus* MIWA	5½ "	Kwarenkô
" 11.	*Athous rufithorax* MIWA	9 "	Urai
" 12.	*Neodiploconus elegans*, var. *obayashii* MIWA	11½ "	Urai
" 13.	*Elater* (*Pseudelater*) *habunensis* MIWA	13 "	Habun
" 14.	*Denticollis puerilis* MIWA	10½ "	Arisan
" 15.	*Denticollis mounaldaui* MIWA	9 "	Musha
" 16.	*Athous* (*Heterathous*) *antennatus*, var. *ruficollis* MIWA	6½ "	Kwarenkô
" 17.	*Melanoxanthus montivagus* MIWA	9 "	Arisan
" 18.	*Corymbites* (*Metactenicerus*) *fuscipes* MIWA	11½ "	Musha
" 19.	*Paralacon argillaceus*, var. *davidi* FAIRMAIRE	15½ "	Arisan
" 20.	*Adelocera ramatasenseni* MIWA	18 "	Musha
" 21.	*Corymbites* (*Actenicerus*) *formosensis* MIWA	20½ "	Hinokiyama
" 22.	*Melanoxanthus 4-guttatus* MIWA	12 "	Horisha
" 23.	*Csikia taiwana* MIWA	10 "	Baibara



Del. M. Arai